Methodology for Estimating Unmet Need: Instruction Manual

Measuring Unmet Need for HIV-Related Primary Medical Care

May 2021

Contents

Executive Summary

This manual provides an update to the Unmet Need Methodology for Ryan White HIV/AIDS Program (RWHAP) Part A and B recipients. It includes background on the Unmet Need requirement, a summary of how changes to the methodology were determined and provides instructions for RWHAP Part A and Part B recipients on how to calculate unmet need using the updated framework.

- Unmet need is defined as "the need for HIV-related health services by individuals with HIV who are aware of their HIV status, but are not receiving regular primary health care."

- Updates to the 2004 methodology were needed due to improvements in data systems and changes in the HIV epidemic.

- The updated Unmet Need framework has *required* estimates and analyses (Section 3) and *enhanced* estimates and analyses. (Section 4)

- Required components in the updated methodology include: Late Diagnoses, Unmet Need (Not in Care), and In Care, Not Virally Suppressed. (Sections 3 and 4)

- *Required* estimates and analyses utilize HIV surveillance data, while *enhanced* estimates and analyses can include RWHAP data and can utilize linked databases. (Sections 3 and 4)

- Word and Excel documents are provided to assist with completion of the estimates and analyses. (Sections 3 and 4, Appendix B).

1. Introduction

1.1 Unmet Need Framework Background

In September 2000, the Health Resources and Services Administration, HIV/AIDS Bureau (HRSA HAB) held its first unmet need consultation to assist the agency, "and its grantees and planning bodies, to develop measures that estimate unmet need,"[1] which became a requirement in the 2000 reauthorization of the Ryan White Comprehensive AIDS Resources Emergency (CARE) Act. The Secretary of Health and Human Services was required "to develop epidemiologic measures for establishing the number of individuals with HIV disease who are not receiving HIV-related health services." The law also required Title I and Title II (now RWHAP Part A and Part B) programs to assess the needs of people with HIV "with particular attention to individuals with HIV disease who know their HIV status but are not receiving HIV-related services." RWHAP Part A and Part B recipients were charged with including a strategy in their comprehensive plans for identifying such individuals, informing them about services, and "enabling the individuals to utilize services, giving particular attention to eliminating disparities in access and services among affected subpopulations and historically underserved communities". RWHAP recipients were specifically directed to develop and support "outreach activities" for finding these individuals.[2]

In 2002, HRSA HAB defined unmet need as: "the need for HIV-related health services by individuals with HIV who are aware of their HIV status, but are not receiving regular primary health care."[3] Between 2002 and 2004, the Institute for Health Policy Studies at the University of California, San Francisco (UCSF) developed a framework for estimating unmet need, selected jurisdictions to test it, and provided technical assistance (TA) on how to implement it. The model used the following operational definitions and data inputs:[4]

- **Unmet need for primary medical care:** "no evidence of any of the following three components of HIV primary medical care during a defined 12-month time frame: Viral Load (VL) test, CD4 count test, or provision of anti-retroviral therapy (ART)."

- **Population size:** the number of individuals diagnosed and living with HIV/non-AIDS and AIDS as of a specified date, from the HIV surveillance system.

- **Care patterns:** the number of individuals with HIV/non-AIDS and AIDS with evidence of one of the stated markers. Three approaches were tested to obtain care patterns data:

  - *Surveillance data* from lab test reports "in jurisdictions with mandatory viral load and CD4 reporting," a preferred method since "reporting applies to all sources of care";

  - *Linked utilization data* obtained from billing or service information in various client-level databases (e.g., RWHAP and Medicaid) and unduplicated using a non-identifying unique identifier to protect confidentiality; and/or

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[1]   HRSA HAB, Unmet Need Consultation Report, for a meeting sponsored by the HRSA HIV/AIDS Bureau. 2000.

[2]   Ryan White CARE Act Amendments of 2000, Sections 2602(b) (4), 2602(d), 2604(b)(1), and 2617(b); Amendments were signed into law October 20, 2000.

[3]   Mosaica, "HRSA/HAB Definitions Related to Needs Assessment," prepared for the Division of Service Systems, HIV/AIDS Bureau by Mosaica: The Center for Nonprofit Development and Pluralism, June 10, 2002.

[4]   James G. Kahn, Jennifer Janney, and Patricia E. Franks, "A Practical Guide to Measuring Unmet Need for HIV-Related Primary medical Care: Using the Unmet Need Framework." Institute for Health Policy Studies, University of California, San Francisco: May 2003.

- *Special studies* "where it is not feasible to obtain total counts of people receiving HIV primary medical care," either Centers for Disease Control and Prevention (CDC)-sponsored surveys or studies developed by jurisdictions, ideally representative of all HIV-positive/aware individuals or all those in care (not just within the RWHAP).

In FY 2004 grant applications, recipients were required to describe their plans for estimating unmet need, including potential data sources, timeline, and personnel who would be involved. In each subsequent grant application, recipients were required to submit an estimate of unmet need using the Framework and to regularly update or improve their estimates.

RWHAP Part A and Part B recipients prepared Unmet Need estimates as part of their application to HRSA HAB through FY 2017, in the Demonstrated Need section of the RWHAP Part A application and the Need Assessment section of the RWHAP Part B application. Recipients were asked to provide a completed Framework table, along with a narrative description, trends in the estimates, information on how the jurisdiction assessed unmet need and how the estimates and assessments were used in decision-making. Though the process was often challenging, recipients became familiar with the Framework and estimates gradually improved. In FY 2016 and FY 2017, RWHAP Part A recipients were required to include estimates and analyses for both the original Unmet Need Framework and a new methodology based upon the HIV care continuum (HCC). The new methodology defined "in care" as having two or more of the following indicators, each at least three months apart within a calendar year:

- Documented medical visit;

- VL test results; or

- CD4 test results.

RWHAP Part B recipients were also asked to use both methods in their FY 2017 applications.

1.2 Updating the Unmet Need Framework

HRSA HAB reviewed the results from the RWHAP Part A methodology referenced above and obtained input from a November 2017 Program Technical Expert Panel (PTEP) on Unmet Need to "assess the need for changes" to the current Unmet Need Framework and "inform the HIV/AIDS Bureau on future development of a new unmet need estimation technology."[5]

Building upon experience with the original methodology, testing of the proposed new methodology, and input from stakeholder experts, HRSA HAB began to explore updating the Unmet Need Framework in September 2018. A systematic review and analysis of historical models and approaches for estimating unmet need was conducted. Findings were shared with an external PTEP whose members included HRSA HAB staff, RWHAP Part A and B recipients, medical researchers, epidemiologists, biostatisticians, and CDC representatives. The PTEP members reviewed and provided critical feedback and ground-level insights on RWHAP Part A and B recipients' current estimation approaches, data collection and reporting capacity, as well as other contextual factors that could impact implementation of a refined Unmet Need methodology.

Feedback from these efforts led to an updated Unmet Need Framework that was field tested in the summer of 2019. Eight jurisdictions (four RWHAP Part A and four Part B recipients) participated in the field test and an additional four jurisdictions (two RWHAP Part A and two Part B recipients) from the PTEP also tested the methodology. Based on field test results, further input from the PTEP, and HRSA HAB review and guidance, the methodology was finalized for use by RWHAP Part A and Part B recipients beginning with the FY 2022 applications.

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[5] Program Technical Expert Panel, Ryan White HIV/AIDS Program Unmet Need Meeting Summary. 2017.

1.3 Technical Assistance Resources

Resources have been developed to support Part A and B recipients in completing the Unmet Need estimates and analyses. These resources are highlighted below.

Resources related to the updated Unmet Need framework can be found on the TargetHIV website and include recordings from six webinars that were done in 2020 and 2021 and two videos, as well as a number of handouts. These are listed below, along with links to the TargetHIV page.

Manual

Webinars and Training

Six webinars were completed in 2020 and 2021 and are outlined below. All webinars were recorded and can be viewed on TargetHIV using the link provided. In addition, pdf versions of the slides are available.

- Webinar 1: The Updated Framework for Estimating Unmet Need for HIV Primary Care - link

- Webinar 2: The Enhanced Estimates and Analyses of the Updated Unmet Need Framework: Going Beyond the Basics - link

- Webinar 3: Required and Enhanced RWHAP Unmet Need Estimates and Analyses: Exploring the Possibilities - link

- Webinar 4: Building Data Infrastructure to Meet the Unmet Need Requirement - link

- Webinar 5: Enhanced Unmet Need Estimates and Analyses: Using Data for Local Planning - link

- Webinar 6: Data Tools for the Updated Unmet Need Estimates and Analyses - link

Tools and Job Aids

Required Reporting Templates and Optional Calculation Tables in Excel

To assist jurisdictions in reporting the completing the Unmet Need estimates and analyses and reporting to HRSA HAB, Required Reporting Templates and Optional Calculation Tables were developed. While word versions can be found in the manual in Appendix AA, versions were also developed in Excel. There are two different versions of the Excel Tool. Both include two Required Reporting Templates and four Optional Calculation Tables. What differs is how the different Templates and Tables relate to one another. In version 1, data auto-populates across different templates and tables. This means you can populate the Optional Calculation Tables and they will then automatically populate the Required Reporting Templates. In version 2, this feature does not exist. Both versions have validations and auto-calculation fields (cells highlighted in yellow) to make things easier for jurisdictions. These versions can be downloaded from TargetHIV.

SAS Program

The CDC has provided a SAS program that can be used to complete estimates and analyses using HIV surveillance data.   Output from the SAS program will align with the content in Optional Calculation Tables 1A and 2A for HIV surveillance data. This SAS program is available to HIV Surveillance contacts in CDC-funded jurisdictions. The SAS program is located on the CDC's Incidence and Case Surveillance Branch's Sharepoint site. The program can be found inside the CDC-supplied SAS programs folder and is named HRSAUnmet.zip. Recipients are not required to use the SAS program.

2. The Updated Unmet Need Framework

2.1 Overview

The updated Unmet Need Framework described in this Manual reflects improvements in both HIV surveillance and RWHAP data as well as changes in the HIV epidemic. The original Framework only required estimates of the number and percent of individuals living with HIV and AIDS in the jurisdiction who were not in care.

The updated Framework addresses additional aspects of unmet need and includes revisions to the definitions used in the earlier Framework. The updated Framework includes two approaches: *required* **estimates and analyses** which meets the minimum requirement for determining Unmet Need by HRSA HAB and *enhanced estimates and analyses* which not only meets the minimum HRSA HAB requirement, but also included additional analyses and estimates that are useful for local planning and resource allocation activities.

This Manual describes both the *required* and *enhanced* estimates and analyses of the updated Unmet Need Framework. The *required* estimates and analyses are described in detail in Section 3 of this Manual; the *enhanced* estimates and analyses are described in Section 4. If a jurisdiction decides to complete only the *required* estimates and analyses, they will use only Section 3. If a jurisdiction chooses to complete both the required and some or all of the *enhanced* estimates and analyses, they will use only Section 4. *Recipients are encouraged but not required to provide **enhanced** estimates and analyses, particularly subpopulation analyses.*

- Section 3 of the Manual describes each *required* Framework component and then provides detailed guidance on developing the required estimates and analyses and entering them on the Unmet Need Required Reporting Templates. In addition to the Templates, optional Calculation Tables designed to help in completing the required estimates and analyses are provided.

- Section 4 describes each *required and enhanced* Framework component and then provides detailed guidance on developing those estimates and analyses. It includes optional Calculation Tables for RWHAP unmet need and subpopulation analyses. The Tables are designed to help the user successfully complete both the required and enhanced estimates and analyses.

- Appendix B provides Word versions of the Unmet Need Required Reporting Templates and Optional Calculation Tables. Excel versions are also available; as previously noted, if version 1 is used, the Optional Calculation Tables will auto-populate the required data in the Unmet Need Required Reporting Templates. In version 2, the Required Reporting Templates will need to be completed manually. In addition, the Excel versions auto-calculate within each Table or Template. All cells that auto-calculate or auto-populate are highlighted in yellow or green respectively.

Every RWHAP Part A and Part B recipient is expected to submit the *required* estimates and analyses using the Unmet Need Required Reporting Templates (Reporting Template A-Unmet Need and Reporting Template B-Priority Populations). The Templates will be a required part of the NOFO/NCC application beginning in FY 2022.

- Instructions for completing the Unmet Need Required Reporting Templates and Optional Calculation Tables are explained in greater detail in Sections 3 and 4.

2.2 *Required* and *Enhanced* Estimates and Analyses

The *required* components of the updated Framework are outlined in Table 1. The *required* estimates and analyses utilize data for people living with diagnosed HIV infection in the jurisdiction and can be obtained from HIV surveillance data in the National HIV Surveillance System (NHSS); at the state and local level, these data are usually collected and managed using the enhanced HIV/AIDS Reporting System (eHARS). For population size, individuals with an HIV-related lab (as listed in the definition) during the most recent five-year period are included. All other measures use the most recent calendar year for which data are available; this should be the last year of the five-year period for population size. More detail on these components and how to obtain estimates and analyses is provided in Section 3.

The *enhanced* components of the updated Framework are outlined in Table 2; jurisdictions that choose to completed *enhanced* estimates and analyses must complete everything outlined in Table 1 plus additional estimates and analyses. Additional estimates and analyses may include using RWHAP in addition to HIV surveillance, conducting subpopulation analyses with HIV surveillance or linking databases. The amount of additional estimates and analyses completed is determined by the jurisdiction. As with the *required* estimates and analyses, all the *enhanced* estimates and analyses should be based on the most recent calendar year for which data are available, which means the data are clean, accurate, and ready for release to the public. The most recent calendar year for RWHAP data should be the same as the most recent year for HIV surveillance data. More detail on these elements and how to complete the *enhanced* estimates and analyses is provided in Section 4.

Table 1: Summary of Components for the Updated Unmet Need Methodology: *Required Estimates and Analyses*[6]

Component	Definition
New Diagnoses	The number of people in the jurisdiction with HIV diagnosed in the most recent calendar year based on residence at time of diagnosis.
Late Diagnoses	The number of people with late diagnosed HIV in the most recent calendar year in the jurisdiction based on residence at time of diagnosis. Late diagnosed HIV is based on the first CD4 test result (<200 cells/mL or a CD4 percentage of total lymphocytes of <14) or documentation of an AIDS-defining condition ≤3 months after a diagnosis of HIV infection. If ≥2 events occurred during the same month and could thus qualify as "first," apply the same conditions applied by CDC.[7]
Population Size	The number of people living with diagnosed HIV infection in the jurisdiction based on most recent known address who had an HIV diagnosis or any other HIV-related lab data (e.g., CD4, VL, genotype, or HIV test even if already diagnosed) reported to the HIV surveillance program during the most recent five calendar year period.[8]
Care Patterns – Number of people with met need (in care)	In the most recent calendar year, the number of people living with diagnosed HIV infection in the jurisdiction based on most recent known address with at least one CD4 or VL test result.

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[6] HIV Surveillance data are required to be used for Table 1 estimates and analyses. Jurisdictions may use linked databases but the use of link databases is not required.

[7] See glossary, under "Late diagnoses" for more detail.

[8] A complete list of HIV-related labs used in the CDC SAS program can be found in Appendix D

Component	Definition
Care Patterns - Number of people with unmet need (not in care)	In the most recent calendar year, the number of people living with diagnosed HIV infection in the jurisdiction based on most recent known address without any CD4 or VL test result.
In Care, Virally Suppressed	In the most recent calendar year, the number of people living with diagnosed HIV infection in the jurisdiction who are in care whose most recent viral load test result was <200 copies/mL.
In Care, Not Virally Suppressed	In the most recent calendar year, the number of people living with diagnosed HIV infection in the jurisdiction who are in care whose most recent viral load test result was ≥200 copies/mL.
Priority Populations	Choose three priority populations in the jurisdiction and determine the number of individuals in each of those priority populations with new diagnoses, late diagnosed HIV, unmet need, and the number in care not virally suppressed.

Table 2: Summary of Components for the Updated Unmet Need Methodology: *Enhanced Estimates and Analyses*[9]

The *enhanced* **estimates and analyses include all data elements from the** *required **estimates and analyses in Table 1 above.***	
Data Element	**Definition**
Number of RWHAP clients	In the most recent calendar year, the number of RWHAP clients in the jurisdiction who received any RWHAP or RWHAP-related funded service.
Care Patterns: Number of RWHAP clients with met need (in care)	In the most recent calendar year, the number of RWHAP clients in the jurisdiction with a CD4 test result or VL test result or outpatient/ambulatory health services (OAHS) visit.[10]
Care Patterns: Number of RWHAP clients with unmet need (not in care)	In the most recent calendar year, the number of RWHAP clients in the jurisdiction without any CD4 test result, VL test result, or OAHS visit.[11]
In Care, Virally Suppressed (RWHAP clients)	For the most recent calendar year, the number of RWHAP clients in the jurisdiction who are in care whose most recent viral load test result was <200 copies/mL.
In Care, Not Virally Suppressed (RWHAP clients)	For the most recent calendar year, the number of RWHAP clients in the jurisdiction who are in care whose most recent viral load test result was ≥200 copies/mL.
Priority Populations	Choose three priority populations in the jurisdiction and determine the number of RWHAP clients in each of those priority populations with an unmet need and those who are in care not virally suppressed.

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[9] The *enhanced* estimates and analyses include all data elements from the ***required*** *estimates and analyses* (See Table 1). RWHAP data may be used for Table 2 estimates and analyses. Jurisdictions may use linked databases, but the use of linked databases is not required.

[10] Jurisdictions may choose to use other services to reflect HIV primary medical care. Any variation from the definitions should be clearly stated in documentation that accompanies the estimates.

[11] Ibid

The *enhanced* estimates and analyses include all data elements from the *required estimates and analyses in Table 1 above.*	
Data Element	**Definition**
Subpopulation Analyses : HIV surveillance data	Determine the characteristics (e.g. current gender identity, age, race/ethnicity, transmission category, and geographic area of residence) of people living with diagnosed HIV infection in the jurisdiction using the previously specified definitions for: • Population Size • New Diagnoses • Late Diagnoses • Care Patterns • In Care, Not Virally Suppressed
Subpopulation Analyses: RWHAP clients	Determine the characteristics (e.g. current gender identity, age, race/ethnicity, transmission category, and geographic area of residence) of RWHAP clients in the jurisdiction using the previously specified definitions for: • RWHAP Clients • Care Patterns • In Care, Not Virally Suppressed

The remainder of the manual is organized based on whether a jurisdiction is completing the *required* or *enhanced* estimates and analyses. More information on the feasibility of the *required* versus *enhanced* unmet need estimates and analyses can be found here. There is also a preparation plan for completing the Unmet Need Estimates and Analyses that jurisdictions can complete.

To review instructions for completing the required estimates and analyses, go to **Preparing the *Required* Unmet Need Estimates and Analyses.** To review instructions for completing the enhanced estimates and analyses, go to **Preparing the *Enhanced* Unmet Need Estimates and Analyses.**

3. Preparing the *Required* Unmet Need Estimates and Analyses

Beginning with the FY 2022 applications to HRSA HAB, all RWHAP Part A and Part B recipients will be required to submit unmet need estimates and analyses annually using the Unmet Need Required Reporting Templates. These Templates ask for population-level estimates and analyses based on HIV surveillance data, including the following:

- The number of people with late diagnosed HIV;

- The estimated number of people living with diagnosed HIV infection in the jurisdiction who are not in care (have unmet need);

- The estimated number of people living with diagnosed HIV infection in the jurisdiction who are in care, not virally suppressed; and

- The estimated number of people from three priority populations (selected by the jurisdiction) newly diagnosed, with late diagnosed HIV, unmet need, and in care not virally suppressed.

This section of the Manual provides instructions for completing *required* estimates and analyses for the Unmet Need Framework. It includes instructions for completing the Unmet Need Required Reporting Templates as well as using the Optional Calculation Tables. An overview of the Required Reporting Templates and Optional Calculation Tables is presented, followed by instructions for how to complete the required estimates and analyses using the Templates and Tables. For the purposes of the instructions, the Templates and Tables in Appendix B will be used, highlighting the calculations required to complete each cell. While not required, the Optional Calculation Tables can make it easier to complete the Required Reporting Templates.

Instructions for using the Required Reporting Templates and Optional Calculation Tables for enhanced estimates and analyses can be found in Section 4. Word versions of the Required Reporting Templates and Optional Calculation Tables can be found in Appendix B, while Excel versions are available as part of the Unmet Need Technical Assistance Tools on the TargetHIV website and can be found here.

3.1 Required Reporting Templates A and B

The Unmet Need Required Reporting Templates are provided to submit the required information to HRSA HAB. There are two different Templates – one for the Unmet Need Estimate (Reporting Template A-Unmet Need), which also includes late diagnosed HIV and in care not virally suppressed, and one for Priority Populations (Reporting Template B-Priority Populations).

3.1.1 Reporting Template A-Unmet Need

The first step is to enter the jurisdiction name on the Template. Using the Excel version of Reporting Template A, choose 'required' for approach using the drop-down menu at the top right corner of the sheet. Immediately below, choose 'no' for linked databases. This Template has five numbers to be populated based on definitions previously reviewed: late diagnoses, new diagnoses, unmet need, population size and in care, not virally suppressed. In addition to the numbers (Column C), percent (Column D), data source (Column E) and years of data (Column F) should also be included. For data source, the assumption is HIV surveillance data are being used for the required approach, so there is

Reporting Template A - Unmet Need					
Jurisdiction Name:			Approach?		[▼]
			Linked Databases Used?	Required	
				Enhanced	
Definition/Description		Number	Percent	Data Source	Year(s) of Data
A	B	C	D	E	F

no explanation for data source written below. If version 1 of the Required Reporting Templates and Optional Calculation Tables are used, they will auto-populate the Template and no additional information needs to be entered aside from what is noted above; in version 2, data sources and years of data must be provided. Percentages will then auto-calculate within the Template based on the numeric values entered.

Note the definitions included in the table are summary definitions. *Please use the full definitions provided in the instructions below.* Specific instructions for each of the estimates are outlined below.

1. Late Diagnoses

Definition/Description		Number	Percent	Data Source	Year(s) of Data
A	B	C	D	E	F
HIV SURVEILLANCE DATA					
Late Diagnosed					
1	**Late diagnoses:** Number of people with late diagnosed HIV in the most recent calendar year in the jurisdiction based on residence at time of diagnosis. Late diagnosed HIV is based on the first CD4 test result (<200 cells/mL or a CD4 percentage of total lymphocytes of <14) or documentation of an AIDS-defining condition ≤3 months after a diagnosis of HIV infection		C1/C2	HIV Surveillance data	
2	**New diagnoses:** Number of people in the jurisdiction with HIV diagnosed in the most recent calendar year based on residence at time of diagnosis				

- *Late diagnoses*: In Row 1 of the Reporting Template A-Unmet Need, enter the **number of people with late diagnosed HIV based on residence at time of diagnosis.** Late diagnoses provide additional understanding of how many people living with diagnosed HIV in the jurisdiction were not tested soon after becoming infected with HIV. As defined by the HRSA HAB Performance Measures and CDC, late diagnoses are the number of people who were diagnosed with Stage 3 HIV (AIDS) within three months of their HIV diagnosis based on the first CD4 test result (<200 cells/mL or a CD4 percentage of total lymphocytes of <14) or documentation of an AIDS-defining condition ≤3 months after a diagnosis of HIV infection. If ≥2 events occurred during the same month and could thus qualify as "first," apply the same conditions applied by CDC.[12]

  - *Number:* Specify the total number in Row 1, Column C.

  - *Percentage*: The percentage is calculated by dividing the number of people with late diagnosed HIV (Row 1, Column C) by the number of people with new HIV diagnoses (Row 2, Column C). If the Excel version of the tool is used, this value will be auto-calculated. *if values are entered incorrectly, an error message will be displayed.*

  - *Year of data*: Year of data should be the most recent calendar year for which data are available. Specify the year in Row 1, Column F.

- *New diagnoses:* In Row 2, enter the number of people in the jurisdiction diagnosed with HIV infection in the most recent calendar year based on residence at time of diagnosis.

  - *Number:* Specify the total number in Row 2, Column C.

  - *Percentage*: There is no percentage required for this component.

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[12] See glossary, under "late diagnoses" for more detail.

- *Year of data*: Year of data should be the most recent calendar year for which data are available. Specify the year in Row 2, Column F.

2. Unmet Need

	Definition/Description	Number	Percent	Data Source	Year(s) of Data
A	**B**	**C**	**D**	**E**	**F**
HIV SURVEILLANCE DATA					
Unmet Need					
3	**Unmet need:** Number of people living with diagnosed HIV infection in the jurisdiction based on most recent known address without any CD4 or VL test in the most recent calendar year		C3/C4	HIV Surveillance data; if linked databases are used please specify[1]	
4	**Population size:** Number of people living with diagnosed HIV infection in the jurisdiction based on most recent known address who had an HIV diagnosis or any other HIV-related lab data (e.g., CD4, VL, genotype, or HIV test even if already diagnosed) reported to the HIV surveillance program during the most recent five calendar year period		■	HIV Surveillance data	

- *Unmet Need:* In Row 3, enter the number of people living with diagnosed HIV infection in the jurisdiction based on most recent known address without any CD4 or VL tests. The number reflects those with an unmet need for HIV primary medical care.

  - *Number*: Specify the total number in Row 3, Column C.

  - *Percentage*: The percentage for Row 3, Column D is calculated by dividing the number of people with an unmet need (Row 3, Column C) by the population size, the number of people living with diagnosed HIV infection (Row 4, Column C). If using the Excel version of the tool, this value will be auto-calculated.

  - *Year of data*: Year of data should be the most recent calendar year for which data are available. Specify the year in Row 3, Column F.

- *Population Size*: In Row 4, enter the total number of people living with diagnosed HIV infection in the jurisdiction based on most recent known address who had an HIV diagnosis or any other HIV-related lab data (e.g., CD4, VL, genotype, or HIV test even if already diagnosed) reported to the HIV surveillance program during the most recent five calendar year period.

  - *Number:* Specify the total number in Row 4, Column C.

  - *Percentage*: There is no percentage required for this component.

  - *Years of data*: Years of data should be the most recent five-year calendar year for which data are available. The final year of the five-year period should be the same year as the year of data used for the other components. Specify the years in Row 4, Column F.

3. In Care, Not Virally Suppressed

	Definition/Description	Number	Percent	Data Source	Year(s) of Data
A	**B**	**C**	**D**	**E**	**F**
In Care, Not Virally Suppressed					
5	**Not virally suppressed:** Number of people living with diagnosed HIV infection in the jurisdiction who are in care and whose most recent viral load test result was ≥200 copies/mL in the most recent calendar year		C5/(C4-C3)	HIV Surveillance data; if linked databases are used please specify[1]	

- *Not Virally Suppressed:* In Row 5, enter the total number of people living with diagnosed HIV infection in the jurisdiction who are in care not virally suppressed, based on the most recent viral load test result. For the purposes of the calculation, the threshold for suppression is <200

copies/mL, so not virally suppressed is a result of ≥200 copies/mL.

- *Number*: Specify the total number in Row 5, Column C.

- *Percentage*: The percentage for Row 5, Column D is calculated by taking the number of people in care not virally suppressed (Row 5, Column C) and dividing it by the difference between the number of people living with diagnosed HIV infection (Row 5, Column 4) and those with an unmet need (Row 5, Column 3). If using the Excel version of the tool, this value will be auto-calculated.

- *Year of data*: Year of data should be the most recent calendar year for which data are available. Specify the year in Row 5, Column F.

3.1.2 Reporting Template B-Priority Populations

Each jurisdiction must identify three priority populations for which they are providing data. A jurisdiction chooses the populations and the criteria to use in selecting them. These might be the same populations used in the grant applications that address Early Identification of Individuals with HIV/AIDS (EIIHA) or the Minority AIDS Initiative (MAI) but this is not required. HRSA HAB may provide additional guidance on selection of these populations in the Notice of Funding Opportunity (NOFO).

Using the Excel version of Reporting Template B, choose 'required' for approach using the drop-down menu at the top right corner of the sheet. This template has five numbers to be populated based on definitions previously reviewed: people living with diagnosed HIV infection, new diagnoses, late diagnoses, unmet need, and in care, not virally suppressed. Data are required for the total population as well as the three priority populations chosen by the jurisdiction to report to HRSA HAB.

		Totals	Numerical Inputs				Auto-Calculated Percentages					
							Within Categories			Across Categories		
	Category	# of People Living with Diagnosed HIV infection	# New Diagnoses	# Late Diagnoses	# Unmet Need	# In Care, Not Virally Suppressed	% Late Diagnosed	% Unmet Need	% In Care, Not Virally Suppressed	% Late Diagnosed	% Unmet Need	% In Care, Not Virally Suppressed
A	B	C	D	E	F	G	H	I	J	K	L	M
	HIV SURVEILLANCE DATA											
1	Total						E1/D1	F1/C1	G1/(C1-F1)	E1/E1	F1/F1	G1/G1
2	PRIORITY POPULATIONS (Determined by Jurisdiction)											
	Priority Population #1						E2/D2	F2/C2	G2/(C2-F2)	E2/E1	F2/F1	G2/G1
	Priority Population #2						E2/D2	F2/C2	G2/(C2-F2)	E2/E1	F2/F1	G2/G1
	Priority Population #3						E2/D2	F2/C2	G2/(C2-F2)	E2/E1	F2/F1	G2/G1

Reporting Template B - Priority Populations

Jurisdiction Name: / Approach?

Specific instructions for each of the estimates are outlined below. Required Reporting Template B Columns are arranged in three groupings and are discussed further below. Columns C-G are populated with numbers based on the calculations. If version 1 of the Required Reporting Templates and Optional Calculation Tables are used, they will auto-populate the Template and no information needs to be entered aside from the jurisdiction name and approach (required); otherwise, numerical inputs and the three priority populations must be provided. Percentages will then auto-calculate within the Template based on the numeric values entered.

- **Category:** There are two categories on this Template: Total and Priority Populations

  - Total: These are the same numerical inputs calculated for Required Reporting Template A.

- Priority Population: Use Column B, Category 2 to enter the three priority populations chosen by the jurisdiction.

- **Numerical Inputs:** Use Columns C, D, E, F, and G to enter the number of people living with diagnosed HIV infection (Column C), the number with a New Diagnosis (Column D), Late Diagnosed HIV (Column E), Unmet Need (Column F), and In Care Not Virally Suppressed (Column G) for the total population as well as each Priority Population chosen.

- **Calculated Percentages:** In addition to the numbers, the Template requires percentage calculations. These are explained below:

  - Within Categories: When the percentage is "within categories," the denominator is the number of people within the stated category (e.g., of all males living with diagnosed HIV infection, what percentage have an unmet need?). The calculation for each table is listed below.

    o For % late diagnosed (Column H), the calculation is the number of people with late diagnosed HIV (Column E) divided by the number of people with new diagnoses in each category (Column D).

    o For % unmet need (Column I), the calculation is the number of people with an unmet need (Column F) divided by the number of people living with diagnosed HIV infection (Column C) for each category.

    o For % in care not virally suppressed (Column J), the calculation is the number of people in care not virally suppressed (Column G) divided by the number of people in care (calculated by using the number of people living with diagnosed HIV infection (Column C) minus the number of people with unmet need (Column F) for each category.

  - Across Categories: When the percentage is "across categories", the denominator is always the total number of people living with diagnosed HIV infection, which is the number in Row 1 of the appropriate Column. (e.g., of all people living with diagnosed HIV infection with an unmet need, what percentage are males). The calculation for each table is listed below.

    o For % late diagnosed (Column K), the calculation is the number of people with late diagnosed HIV (Column E) for each category divided by the total number of people with late diagnosed HIV (Column E).

    o For % unmet need (Column L), the calculation is the number of people with an unmet need (Column F) for each category divided by the total number of people with an unmet need (Column F).

    o For % in care not virally suppressed (Column M), the calculation is the number of people in care not virally suppressed for each category (Column G) divided by the total number of people in care not virally suppressed (Column G).

3.2 Optional Calculation Tables

These Tables are provided for summarizing the inputs needed for estimates and calculating results related to late diagnoses, unmet need, and viral suppression. Use Table 1A for HIV surveillance data for all people living with diagnosed HIV infection in the jurisdiction. Use Table 2A for HIV surveillance data for priority populations.

The description and instructions outlined below are specific for using the Word version of the Optional Calculation Tables provided in Appendix B with the respective calculation formulas as a

reference. If version 1 of the Excel is used, the Optional Calculation Table 1A auto-populates Required Reporting Template A-Unmet Need and Optional Calculation Table 2A auto-populates Required Reporting Template B-Priority Populations.

3.2.1 Optional Calculation Table 1A-HIV Surveillance Data

This Table can be used for all the calculations for the ***required*** estimates and analyses. Note the definitions included in the table are summary definitions. ***Please use the full definitions provided in the instructions below***. The SAS Program provided by the CDC will output results in the format of Optional Calculation Table 1A.

Given that HIV surveillance data is required, it is already listed in the Table in Column E as the data source. Cells that are auto-calculated in the Excel version based on inputs are highlighted in yellow.

1. **Years of Data -** For the purposes of the calculations in this Table, two different time frames are used. All calculations with the exception of population size use the most recent calendar for which data are available, which should be the same year across calculations. For population size, the most recent five-year calendar for which data are available is used. Note that the last year of the most recent five-year period should be the same year as the most recent calendar year for which data are available.

A	B	C	D	E
Years of data				
1	**New Diagnoses:** Most recent calendar year for which data are available			
2	**Care Patterns:** Most recent calendar year for which data are available			
3	**Population size:** Most recent 5 calendar year period for which data are available			

New Diagnoses: In Row 1, Column C, enter the most recent calendar year of data used for the estimates and analyses. The Excel version has a dropdown menu to choose the year.

- *Care Patterns:* In Row 2, Column C, enter the most recent calendar year of data used for the estimates and analyses. This should be the same year as new diagnoses. In the Excel version, the year chosen for new diagnoses auto-populates in Row 2, Column C.

- *Population Size:* In Row 3, Columns C and D, enter the first and last years of the five-year period. The last year should be the same year as the year that was entered for new diagnoses and care patterns; the first year should be five years prior (e.g., 2010-2014). In the Excel version, the choice for Rows 1 and 2 will auto-populate the five-year period for Row 3, Columns C-D.

2. **Late Diagnosed -** There are two rows for late diagnosed:

A	B	C	D	E
	Definition/Description	**Number**	**Percent**	**Data Source**
Late Diagnosed				
4	**Late diagnoses:** Number of people with late diagnosed HIV in the most recent calendar year in the jurisdiction based on residence at time of diagnosis. Late diagnosed HIV is based on the first CD4 test result (<200 cells/mL or a CD4 percentage of total lymphocytes of <14) or documentation of an AIDS-defining condition ≤3 months after a diagnosis of HIV infection		C4/C5	HIV Surveillance data
5	**New diagnoses:** Number of people in the jurisdiction with HIV diagnosed in the most recent calendar year based on residence at time of diagnosis			

- *Late Diagnoses:* In Row 4 of the Calculation Table, enter the **number of people with late diagnosed HIV based on residence at time of diagnosis.** Late diagnoses provide additional understanding of how many people living with diagnosed HIV in the jurisdiction were not tested soon after becoming infected with HIV. As defined by the HRSA HAB Performance Measures and CDC, late diagnoses are the number and percent of people with HIV who know their status

but were diagnosed with Stage 3 HIV (AIDS) within three months of their HIV diagnosis based on the first CD4 test result (<200 cells/mL or a CD4 percentage of total lymphocytes of <14) or documentation of an AIDS-defining condition ≤3 months after a diagnosis of HIV infection. If ≥2 events occurred during the same month and could thus qualify as "first," apply the same conditions applied by CDC[13]. Late diagnoses should be determined using HIV surveillance data.

- ▪ *Number:* Specify the total number in Row 4, Column C
- ▪ *Percentage*: Enter the percentage for Row 4, Column D using Row 4, Column C divided by Row 5, Column C. If using the Excel version, the percentage will be auto-calculated once Row 5 is populated.

- • *New Diagnoses:* In Row 5, enter the number of people diagnosed with HIV infection in the most recent calendar year in the jurisdiction based on residence at time of diagnosis.

- ▪ *Number:* Specify the total number in Row 5, Column C.
- ▪ *Percentage*: There is no percentage required for this component.

3. **Population Size:** In Row 6, enter the total number of people living with diagnosed HIV infection in the jurisdiction based on most recent known address who had an HIV diagnosis or any other HIV-related lab data (e.g., CD4, VL, genotype, or HIV test even if already diagnosed) reported to the HIV surveillance program during the most recent five calendar year period.

A	B	C	D	E
	Definition/Description	Number	Percent	Data Source
Population Size				
6	Population size: Number of people living with diagnosed HIV infection in the jurisdiction based on most recent known address who had an HIV diagnosis or any other HIV-related lab data (e.g., CD4, VL, genotype, or HIV test even if already diagnosed) reported to the HIV surveillance program during the most recent five calendar year period			HIV Surveillance data

- ▪ *Number:* Specify the total number in Row 6, Column C.
- ▪ *Percentage*: There is no percentage required for this component.

4. **Care Patterns:** There are two rows for care patterns.

A	B	C	D	E
	Definition/Description	Number	Percent	Data Source
Care Patterns				
7	Met need (In care): Number of people living with diagnosed HIV infection in the jurisdiction based on most recent known address with a CD4 test or VL test in the most recent calendar year		C7/C6	HIV Surveillance data; if linked databases are used please specify[1]
8	Unmet need: Number of people living with diagnosed HIV infection in the jurisdiction based on most recent known address without any CD4 or VL test in the most recent calendar year		C8/C6	

- • *Met Need:* In Row 7, enter the number of people living with diagnosed HIV infection in the jurisdiction based on most recent known address with at least one CD4 or VL test in the most recent calendar year.

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[13] See glossary, under "late diagnoses" for more detail.

- *Number:* Specify the number of people with met need in Row 7, Column C.
- *Percentage:* Enter the percentage in Row 7, Column D using Row 7, Column C divided by Row 6, Column C. If using the Excel version, the percentage in Row 7, Column D will auto-calculate.

- ***Unmet Need:*** In Row 8, enter the number people living with diagnosed HIV infection in the jurisdiction based on most recent known address without any CD4 or VL test in the most recent calendar year.
  - *Number:* Specify the number in Row 8, Column C. If using the Excel version, the number will auto-calculate using Row 6, Column C minus Row 7, Column C.
  - *Percentage*: Enter the percentage in Row 8, Column D using Row 8, Column C divided by Row 6, Column C. If using the Excel version, the percentage is auto-calculated.

5. **In Care, Viral Suppression**: There are two rows for viral suppression:

A	B	C	D	E
	Definition/Description	Number	Percent	Data Source
In Care, Viral Suppression				
9	**Virally suppressed:** Number of people living with diagnosed HIV infection in the jurisdiction who are in care and whose most recent viral load test result was <200 copies/mL in the most recent calendar year		C9/C7	HIV Surveillance data; if linked databases are used please specify[1]
10	**Not virally suppressed:** Number of people living with diagnosed HIV infection in the jurisdiction who are in care and whose most recent viral load test result was ≥200 copies/mL in the most recent calendar year		C10/C7	

- ***Virally Suppressed***: In Row 9, enter the number of people living with diagnosed HIV infection in the jurisdiction who are in care (met need) and were virally suppressed based on the most recent viral load test result. For the purposes of the calculation, the threshold for suppression is <200 copies/mL, so virally suppressed is a result <200 copies/mL.
  - *Number:* Specify the number of people in care and virally suppressed in Row 9, Column C.
  - *Percentage:* Enter the percentage in Row 9, Column D using Row 9, Column C divided by Row 7, Column C. If using the Excel version, the percentage in Row 9, Column D is auto-calculated.

- ***Not Virally Suppressed:*** In Row 10, enter the number of people living with diagnosed HIV infection in the jurisdiction who are in care (met need) whose most recent viral load test result was ≥200 copies/mL.
  - *Number:* Specify the number of people in care and not virally suppressed in Row 10, Column C. If using the Excel version, this number will auto-calculate using Row 7, Column C minus Row 9, Column C.
  - *Percentage*: Enter the percentage in Row 10, Column D using Row 10, Column C divided by Row 7, Column C. If using the Excel version, the percentage in Row 10, Column D is auto-calculated.

3.2.2 Optional Calculation Table 2A-Subpopulations HIV Surveillance Data

This Table can be used for all of the calculations for the ***required*** estimates and analyses; results will auto-populate in the Reporting Template B-Priority Populations. Cells that are auto-calculated based on inputs are highlighted in yellow.

Calculation Table 2A: Subpopulation Analyses – HIV Surveillance Data													
Jurisdiction Name:													
	Category	Totals	Numerical Inputs					Auto-Calculated Percentages					
								Within Categories			Across Categories		
		# of People Living with Diagnosed HIV Infection	# of New Diagnoses	# Late Diagnoses	# In Care	# Unmet Need	# In Care Not Virally Suppressed	% Late Diagnosed	% Unmet Need	% In Care Not Virally Suppressed	% Late Diagnosed	% Unmet Need	% In Care Not Virally Suppressed
7	PRIORITY POPULATIONS (Determined by jurisdiction)												
	Priority Population #1							E7/D7	G7/C7	H7/F7	E7/E1	G7/G1	H7/H1
	Priority Population #2							E7/D7	G7/C7	H7/F7	E7/E1	G7/G1	H7/H1
	Priority Population #3							E7/D7	G7/C7	H7/F7	E7/E1	G7/G1	H7/H1

Table Columns are arranged in three groupings to be discussed further below. Columns C-H are populated with numbers based on the calculations. Columns I-N percentages are auto-calculated based on values entered for Columns C-G. Calculations are provided for the total population as well as the three priority populations chosen by the jurisdiction to report to HRSA HAB.

- **Category:** There are two categories on this Table: Total and Priority Populations
  - *Total:* For Row 1, enter each of the numerical inputs described below.
  - *Priority Populations*: Use Column B, Category 7 to enter the three priority populations chosen by the jurisdiction.

- **Numerical Inputs:** Use Columns C, D, E, F, G and H in Table 2A to enter the total number of people living with diagnosed HIV infection (Column C), the number with a New Diagnosis (Column D), Late Diagnosed HIV (Column E), In Care (Column F) Unmet Need (Column G), and In Care Not Virally Suppressed (Column H) for the total population as well as each priority population chosen. For the V1 Excel version, the information for the total population is populated from data entered in Table 1A.

- **Calculation Percentages:** Calculations of percentages within and across categories are included because both are useful for planning. They are explained below. If the Excel version of the tool is used, the percentages will auto-calculate:
  - Within Categories: The denominator is the number of people within the stated category (e.g. of all males living with diagnosed HIV infection, what percentage have an unmet need?). The calculation is listed below.
    - o For % late diagnosed (Column I), the calculation is the number of people with late diagnosed HIV (Column E) divided by the number of people with new diagnoses in each category (Column D) for each category.
    - o For % unmet need (Column J), the calculation is the number of people with an unmet need (Column G) divided by the number of people living with diagnosed HIV infection (Column C) for each category.
    - o For % in care not virally suppressed (Column K), the calculation is the number of people in care not virally suppressed (Column H) divided by the number of people in care (Column F) for each category.
  - Across Categories: The denominator is always the total number of people living with diagnosed HIV infection – the number in Row 1 of the appropriate Column. (e.g., of all people living with diagnosed HIV infection with an unmet need, what percentage are males?). The calculation is listed below.
    - o For % late diagnosed (Column L), the calculation is the number of people with late diagnosed HIV (Column E) for each category divided by the total number of people with late diagnosed HIV (Column E).

- For % unmet need (Column M), the calculation is the number of people with an unmet need (Column G) for each category divided by the total number of people with an unmet need (Column G).

- For % in care not virally suppressed (Column N), the calculation is the number of people in care not virally suppressed (Column H) divided by the number of people in care not virally suppressed (Column H) for each category.

4. Preparing the *Enhanced* Unmet Need Estimates and Analyses

4.1 Overview

Beginning with the FY 2022 applications to HRSA HAB, all RWHAP Part A and Part B recipients will be required to submit unmet need estimates and analyses annually using the Unmet Need Required Reporting Templates. The Templates as designed enable jurisdictions to not only report *required* but also *enhanced* estimates and analyses. As noted earlier in the manual, jurisdictions that choose to complete *enhanced* estimates and analyses must complete everything outlined as part of the required estimates and analyses plus additional estimates and analyses. This means that jurisdictions will use the Templates for population-level estimates and analyses based on HIV surveillance data including the following:

- The number of people with late diagnosed HIV;

- The estimated number of people living with diagnosed HIV infection in the jurisdiction who are not in care (have unmet need);

- The estimated number of people living with diagnosed HIV infection in the jurisdiction who are in care but are not virally suppressed; and

- The estimated number of people from three priority populations (selected by the jurisdiction) with new diagnoses, late diagnosed HIV, with an unmet need, and in care not virally suppressed.

In addition, jurisdictions can also use the Templates to report additional estimates and analyses that may include using RWHAP data, in addition to HIV surveillance data, conducting subpopulation analyses with HIV surveillance and/or RWHAP data or linking databases. The additional estimates and analyses that are completed is determined by the jurisdiction.

This section of the Manual provides instructions for completing *enhanced* estimates and analyses for the Unmet Need Framework. It includes instructions for completing the Unmet Need Required Reporting Templates (no need to use Section 3), and additional estimates and analyses An overview of the Required Reporting Templates and Optional Calculation Tables is presented, followed by instructions for how to complete the *enhanced* estimates and analyses using the Templates and Tables. For the purposes of the instructions, the Templates and Tables in Appendix B will be used, highlighting the calculations required to complete each cell. While not required, the Optional Calculation Tables can make it easier to complete the Required Reporting Templates.

Instructions for using the Template for *required* estimates and analyses can be found in Section 3. Word versions of the Required Reporting Templates and Optional Calculation Tables can be found in Appendix B, while Excel versions are available as part of the Unmet Need Technical Assistance Tools on the TargetHIV website and can be found here.

4.2 RWHAP Estimates and Analyses

While the *required* estimates and analyses using HIV surveillance data are very helpful, they can be limiting for RWHAP planning or resource allocation purposes. Therefore, completing estimates and analyses for RWHAP clients is also recommended. Specifically, jurisdictions can calculate the number of RWHAP clients with an unmet need as well as those who are in care not virally suppressed. These additional estimates and analyses will enable jurisdictions to better prioritize the use of resources. In addition, running estimates and analyses for RWHAP clients enables comparisons to the overall population living with diagnosed HIV infection. For example, the

percentage of people living with diagnosed HIV infection with an unmet need may be 40%, but for RWHAP clients it may only be 15%. This would prompt different action steps for the jurisdiction.

4.3 Subpopulation Analyses

As explained in Section 2, the only subpopulation analyses required for the *required* estimates and analyses are for three priority populations selected by the jurisdiction. However, HRSA HAB encourages jurisdictions to carry out more extensive subpopulation analyses, which help recipients and planning bodies understand not only the size and proportion of people with late diagnosed HIV, unmet need, and in care not virally suppressed, but also the characteristics and the geographic areas within the jurisdiction for which people have high rates of unmet need and low rates of viral suppression even though they are in care.

Demographic and subpopulation analyses as specified for the *enhanced* estimates and analyses are designed to allow for comparisons to be made both within and across groups. This helps in identifying which subpopulations or geographic areas may have disproportionate levels of late diagnoses, unmet need or in care not virally suppressed. The data are also helpful in identifying the need for refinements in the system of care to better serve these subpopulations, to improve retention, medication adherence, and viral suppression. Subpopulation analysis may also be useful for other purposes. It may help in meeting other RWHAP Part A and Part B requirements and needs related to EIIHA priorities, Ending the HIV Epidemic: A Plan for America plans, and/or Minority AIDS Initiative reporting.

The *enhanced* estimates and analyses include a suggested list of characteristics for subpopulation analyses generally collected in both HIV surveillance and RWHAP data. The characteristics used will be influenced by data availability and completeness. Suggested characteristics include:

- Current gender identity (or sex at birth if current gender identity data are not available)
- Race/ethnicity
- Age
- Most recent address (zip code, city, county), used for geographic groupings (note that residence at time of diagnosis is used for new and late diagnoses only)
- Transmission risk category

The RWHAP data may also include other data such as income, insurance status, housing status, mental health needs, substance use, or incarceration history. If the unmet need estimates and analyses are based on linked databases (e.g., HIV surveillance, RWHAP ADAP, Medicaid), additional information may be available for subpopulation analyses.

Whether or not linked databases are used, subpopulation analyses for the total HIV population should be conducted using available HIV surveillance data for all of the following subgroups, and results presented and compared:

- People with new diagnoses
- People with late diagnosed HIV
- People living with diagnosed HIV infection who have met need (are in care)
- People living with diagnosed HIV infection who have unmet need (are not in care)
- People living with diagnosed HIV infection who are in care and are virally suppressed
- People living with diagnosed HIV infection who are in care not virally suppressed

Similarly, using RWHAP data, RWHAP Part A and B recipients should be able to generate subpopulation analyses for:

- All RWHAP clients

- RWHAP clients who have met need (are in care)

- RWHAP clients who have an unmet need (are not in care)

- RWHAP clients who are in care and are virally suppressed

- RWHAP clients who are in care but are not virally suppressed

Where feasible, it is helpful to go beyond analysis based on a single characteristic – such as race/ethnicity, age, or gender – to look at a combination of characteristics and consider subpopulations of special interest to the jurisdiction. This type of analysis of subpopulations provides especially helpful information for planning and decision making.

4.4 Linked Databases

Jurisdictions may choose to use linked databases (e.g., HIV surveillance, RWHAP ADAP, Medicaid,) to refine estimates and analyses. Linked databases rely on using name, social security number, and/or other unique identifiers to link clients across databases, resulting in more information about each individual than would otherwise be available through HIV surveillance or RWHAP data alone. Linked databases can only be used for care pattern definitions and in care virally suppression but may not be used to determine the number of people living with diagnosed HIV infection or RWHAP clients. For example, some jurisdictions have limited VL data in their RWHAP client-level database but could obtain these data from HIV surveillance data. Jurisdictions that choose to use linked databases should specify the databases used.

Linked databases can also assist jurisdictions in better understanding what percentage of RWHAP clients are reflected in HIV surveillance data. They can be beneficial for other activities such as Data to Care, as an individual who may not have CD4 or VL data in HIV surveillance data may have a service in RWHAP data and is in the RWHAP system of care; therefore, they may not be 'out of care'. Linked databases can also provide more information as the available data in each dataset provides more information for analyses.

If linked databases are used, clinical data should be from a clinical source such as a lab or a clinician's signed document and should not be client self-report. When reporting results from linked databases, the respective denominators should be used. For example, for any HIV surveillance data analyses, the denominator is persons living with diagnosed HIV infection. For RWHAP data analyses, the denominator is the number of people receiving RWHAP services.

4.5 Required Reporting Templates A and B

The Unmet Need Required Reporting Templates are provided to submit the required information to HRSA HAB. There are two different Templates – one for the Unmet Need Estimate (Reporting Template A-Unmet Need), which also includes late diagnosed HIV and in care not virally suppressed, and one for Priority Populations (Reporting Template B-Priority Populations).

4.5.1 Reporting Template A-Unmet Need

Using the Excel version of Reporting Template A, choose 'enhanced' for approach using the drop-down menu at the top right corner of the sheet. Once enhanced is chosen, an additional section for RWHAP data will be displayed in the Template. Immediately below, choose 'yes' or 'no' for linked

Reporting Template A - Unmet Need					
Jurisdiction Name:				Approach?	
				Linked Databases Used?	Required
					Enhanced
Definition/Description		**Number**	**Percent**	**Data Source**	**Year(s) of Data**
A	B	C	D	E	F

databases. This Template has five numbers to be populated based on definitions previously reviewed: late diagnoses, new diagnoses, unmet need, population size and in care, not virally suppressed. In addition to the numbers (Column C), percent (Column D), data source (Column E) and years of data (Column F) should also be included. If version 1 of the Excel Required Reporting Templates and Optional Calculation Tables are being used, they will auto-populate the Template and no information needs to be entered aside from the approach (enhanced) and additional data sources if linked databases are being used; otherwise, numbers, data sources and years of data must be provided. Percentages will then auto-calculate within the Template based on the numeric values entered.

Note the definitions included in the table are summary definitions. *Please use the full definitions provided in the instructions below.* Specific instructions for each of the estimates are outlined below.

1. Late Diagnoses

Definition/Description		**Number**	**Percent**	**Data Source**	**Year(s) of Data**
A	B	C	D	E	F
HIV SURVEILLANCE DATA					
Late Diagnosed					
1	**Late diagnoses:** Number of people with late diagnosed HIV in the most recent calendar year in the jurisdiction based on residence at time of diagnosis. Late diagnosed HIV is based on the first CD4 test result (<200 cells/mL or a CD4 percentage of total lymphocytes of <14) or documentation of an AIDS-defining condition ≤3 months after a diagnosis of HIV infection		C1/C2	HIV Surveillance data	
2	**New diagnoses:** Number of people in the jurisdiction with HIV diagnosed in the most recent calendar year based on residence at time of diagnosis				

- *Late diagnoses*: In Row 1 of the Reporting Template A-Unmet Need, enter the **number of people with late diagnosed HIV based on residence at time of diagnosis.** Late diagnoses provide additional understanding of how many people with HIV in the jurisdiction were not tested soon after becoming infected with HIV. As defined by the HRSA HAB Performance Measures and CDC, late diagnoses are the number of people who were diagnosed with Stage 3 HIV (AIDS) within three months of their HIV diagnosis based on the first CD4 test result (<200 cells/mL or a CD4 percentage of total lymphocytes of <14) or documentation of an AIDS-defining condition ≤3 months after a diagnosis of HIV infection. If ≥2 events occurred during the same month and could thus qualify as "first," apply the same conditions applied by CDC.[14]

  - *Number:* Specify the total number in Row 1, Column C.

  - *Percentage*: The percentage is calculated by dividing the number of people with late diagnosed HIV (Row 1, Column C) by the number of people with new HIV diagnoses (Row 2, Column C). If the Excel version of the tool is used, this value will be auto-calculated.

  - *Data Source*: HIV surveillance data are the default listing in the data source for the enhanced approach. If linked databases are being used, list the additional database(s) in Row 1, Column E.

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[14] See glossary, under "late diagnoses" for more detail.

- *Year of data*: Year of data should be the most recent calendar year for which data are available. Specify the year in Row 1, Column F.

- **New diagnoses:** In Row 2, enter the number of people in the jurisdiction diagnosed with HIV infection in the most recent calendar year based on residence at time of diagnosis.

  - *Number:* Specify the total number in Row 2, Column C.

  - *Percentage*: There is no percentage required for this component.

  - *Data Source*: HIV surveillance data are the default listing in the data source for the enhanced approach. If linked databases are being used, list the additional database(s) in Row 2, Column E.

  - *Year of data*: Year of data should be the most recent calendar year for which data are available. Specify the year in Row 2, Column F.

2. **Unmet Need**

Definition/Description		Number	Percent	Data Source	Year(s) of Data
A	B	C	D	E	F
Unmet Need					
3	Unmet need: Number of people living with diagnosed HIV infection in the jurisdiction based on most recent known address without any CD4 or VL test in the most recent calendar year		C3/C4	HIV Surveillance data; if linked databases are used please specify[1]	
4	Population size: Number of people living with diagnosed HIV infection in the jurisdiction based on most recent known address who had an HIV diagnosis or any other HIV-related lab data (e.g., CD4, VL, genotype, or HIV test even if already diagnosed) reported to the HIV surveillance program during the most recent five calendar year period			HIV Surveillance data	

- **Unmet Need:** In Row 3, enter the number of people living with diagnosed HIV infection in the jurisdiction based on most recent known address without any CD4 or VL tests. The number reflects those with an unmet need for HIV primary medical care.

  - *Number*: Specify the total number in Row 3, Column C.

  - *Percentage*: The percentage for Row 3, Column D is calculated by dividing the number of people with an unmet need (Row 3, Column C) by the number of people living with diagnosed HIV infection (Row 4, Column C). If using the Excel version of the tool, this value will be auto-calculated.

  - *Data Source*: HIV surveillance data are the default listing in the data source for the enhanced approach. If linked databases are being used, list the additional database(s) in Row 3, Column E.

  - *Year of data*: Year of data should be the most recent calendar year for which data are available. Specify the year in Row 3, Column F.

- **Population Size**: In Row 4, enter the total number of people living with diagnosed HIV infection in the jurisdiction based on most recent known address who had an HIV diagnosis or any other HIV-related lab data (e.g., CD4, VL, genotype, or HIV test even if already diagnosed) reported to the HIV surveillance program during the most recent five calendar year period.

  - *Number:* Specify the total number in Row 4, Column C.

  - *Percentage*: There is no percentage required for this component.

- *Data Source*: HIV surveillance data are the default listing in the data source for the enhanced approach. If linked databases are being used, list the additional database(s) in Row 4, Column E.

- *Years of data*: Years of data should be the most recent five-year calendar year for which data are available. The final year of the five-year period should be the same year as the year of data used for the other components. Specify the years in Row 4, Column F.

3. In Care, Not Virally Suppressed

	Definition/Description	Number	Percent	Data Source	Year(s) of Data
A	B	C	D	E	F
In Care, Not Virally Suppressed					
5	Not virally suppressed: Number of people living with diagnosed HIV infection in the jurisdiction who are in care and whose most recent viral load test result was ≥200 copies/mL in the most recent calendar year		C5/(C4-C3)	HIV Surveillance data; if linked databases are used please specify[1]	

- *Not Virally Suppressed:* In Row 5, enter the total number of people living with diagnosed HIV infection in the jurisdiction who are in care not virally suppressed, based on the most recent viral load test result. For the purposes of the calculation, the threshold for suppression is <200 copies/mL, so not virally suppressed is a result of ≥200 copies/mL.

  - *Number*: Specify the total number in Row 5, Column C.

  - *Percentage*: The percentage for Row 5, Column D is calculated by taking the number of people in care not virally suppressed (Row 5, Column C) and dividing it by the difference between the number of people living with diagnosed HIV infection (Row 5, Column 4) and those with an unmet need (Row 5, Column 3). If using the Excel version of the tool, this value will be auto-calculated.

  - *Data Source*: HIV surveillance data are the default listing in the data source for the enhanced approach. If linked databases are being used, list the additional database(s) in Row 5, Column E.

  - *Year of data*: Year of data should be the most recent calendar year for which data are available. Specify the year in Row 5, Column F.

RWHAP Data
4. Unmet Need

	Definition/Description	Number	Percent	Data Source	Year(s) of Data
A	B	C	D	E	F
RYAN WHITE HIV/AIDS PROGRAM (RWHAP) DATA					
Unmet Need					
6	Unmet need: Number of RWHAP clients in the jurisdiction without any CD4, VL test or OAHS visit[3] in the most recent calendar year		C6/C7	RWHAP Database; if linked databases are used please specify[2]	
7	RWHAP clients: Number of RWHAP clients in the jurisdiction who received any RWHAP or RWHAP-related funded service in the most recent calendar year			RWHAP data	

- *Unmet Need:* In Row 6, enter the number of RWHAP clients in the jurisdiction without any of the following: CD4 test, VL test or OAHS visit. Jurisdictions have the flexibility to use other services instead of or in addition to OAHS. In choosing another service or adding services, jurisdictions should consider services that reflect clients in HIV primary medical care. Modifications to the definition should be noted in the NOFO/NCC narrative response. The

number reflects RWHAP clients with an unmet need for HIV primary medical care.

- *Number:* Specify the total number in Row 6, Column C.

- *Percentage*: The percentage for Row 6, Column D is calculated by dividing the number of people with an unmet need in Row 6, Column C by the number of RWHAP clients in Row 7, Column C. If using the Excel version of the tool, this value will be auto-calculated.

- *Data Source*: RWHAP data are the default listing in the data source for the ***enhanced*** approach. If linked databases are being used, list the additional database(s) in Row 6, Column E.

- *Year of data*: Year of data should be the most recent calendar year for which data are available and should be the same year of data used for HIV surveillance data. Specify the year in Row 6, Column F.

- **RWHAP Clients:** In Row 7, enter the total number of RWHAP clients in the jurisdiction who received a RWHAP or RWHAP-related funded service in the most recent calendar year.

  - *Number:* Specify the total number in Row 7, Column C.

  - *Percentage*: There is no percentage required for this component.

  - *Data Source*: RWHAP data are the default listing in the data source for the ***enhanced*** approach. If linked databases are being used, list the additional database(s) in Row 7, Column E.

  - *Year of data*: Year of data should be the most recent calendar year for which data are available and should be the same year of data used for HIV surveillance data. Specify the year in Row 7, Column F.

5. In Care, Not Virally Suppressed

A	B	C	D	E	F
	Definition/Description	**Number**	**Percent**	**Data Source**	**Year(s) of Data**
RYAN WHITE HIV/AIDS PROGRAM (RWHAP) DATA					
In Care, Not Virally Suppressed					
8	**Not virally suppressed:** Number of RWHAP clients in the jurisdiction who are in care and whose most recent viral load test result was ≥200 copies/mL in the most recent calendar year		C8/(C7-C6)	RWHAP Database; if linked databases are used please specify[2]	

- *Not Virally Suppressed:* In Row 8, enter the total number of RWHAP clients in care who are not virally suppressed, based on the most recent viral load test result. For the purposes of the calculation, the threshold for suppression is <200 copies/mL, so not suppressed is a result ≥200 copies/mL.

  - *Number:* Specify the total number in Column C, Row 8.

  - *Percentage*: The percentage for Row 8, Column D is calculated by dividing the number of RWHAP clients not virally suppressed (Row 8, Column C) by the difference between the number of RWHAP clients receiving any RWHAP or RWHAP-related service in Row 7, Column C from those with an unmet need in Row 6, Column C. If using the Excel version of the tool, this value will be auto-calculated.

  - *Data Source*: RWHAP data are the default listing in the data source for the ***enhanced*** approach. If linked databases are being used, list the additional database(s) in Row 8, Column E.

  - *Year of data*: Year of data should be the most recent calendar year for which data are available and should be the same year of data used for HIV surveillance data. Specify the year in Row 8, Column F.

4.5.2 Reporting Template B-Priority Populations

Each jurisdiction must identify three priority populations for which they are providing data. A jurisdiction chooses the populations and the criteria to use in selecting them. These might be the same populations used in the grant applications that address Early Identification of Individuals with HIV/AIDS (EIIHA) or the Minority AIDS Initiative (MAI) but this is not required. HRSA HAB may provide additional guidance on selection of these populations in the Notice of Funding Opportunity (NOFO).

Using the Excel version of Reporting Template B, choose 'enhanced' for approach using the drop-down menu at the top right corner of the sheet. Once enhanced is chosen, an additional section for RWHAP data will be displayed in the Template. This Template has five numbers to be populated for HIV surveillance data based on definitions previously reviewed: people living with diagnosed HIV infection, new diagnoses, late diagnoses, unmet need, and in care, not virally suppressed. For RWHAP data, there are three numbers to be populated: number of RWHAP clients, unmet need and in care, not virally suppressed. Data are required for the total population as well as the three priority populations chosen by the jurisdiction to report to HRSA HAB.

| | Reporting Template B - Priority Populations | | | | | | | | | | | |

Reporting Template B - Priority Populations

		Totals	Numerical Inputs				Auto-Calculated Percentages					
Jurisdiction Name:										Approach?		
							Within Categories			Across Categories		
	Category	# of People Living with Diagnosed HIV infection	# New Diagnoses	# Late Diagnoses	# Unmet Need	# In Care, Not Virally Suppressed	% Late Diagnosed	% Unmet Need	% In Care, Not Virally Suppressed	% Late Diagnosed	% Unmet Need	% In Care, Not Virally Suppressed
A	B	C	D	E	F	G	H	I	J	K	L	M
HIV SURVEILLANCE DATA												
1	Total						E1/D1	F1/C1	G1/(C1-F1)	E1/E1	F1/F1	G1/G1
2	**PRIORITY POPULATIONS (Determined by Jurisdiction)**											
	Priority Population #1						E2/D2	F2/C2	G2/(C2-F2)	E2/E1	F2/F1	G2/G1
	Priority Population #2						E2/D2	F2/C2	G2/(C2-F2)	E2/E1	F2/F1	G2/G1
	Priority Population #3						E2/D2	F2/C2	G2/(C2-F2)	E2/E1	F2/F1	G2/G1
RYAN WHITE HIV/AIDS PROGRAM (RWHAP) DATA												
		Totals	Numerical Inputs				Auto-Calculated Percentages					
								Within Categories			Across Categories	
	Category	# of RWHAP Clients			# Unmet Need	# In Care, Not Virally Suppressed		% Unmet Need	% In Care, Not Virally Suppressed		% Unmet Need	% In Care, Not Virally Suppressed
A	B	C			F	G		I	J		L	M
5	Total							F5/C5	G5/(C5-F5)		F5/F5	G5/G5
6	**PRIORITY POPULATIONS (Determined by Jurisdiction)**											
	Priority Population #1							F6/C6	G6/(C6-F6)		F6/F5	G6/G5
	Priority Population #2							F6/C6	G6/(C6-F6)		F6/F5	G6/G5
	Priority Population #3							F6/C6	G6/(C6-F6)		F6/F5	G6/G5

Specific instructions for each of the estimates are outlined below. Template B Columns are arranged in three groupings and are discussed further below. Columns C-G are populated with numbers based on the calculations. If version 1 of the Required Reporting Templates and Optional Calculation Tables are used, they will auto-populate the Template and no information needs to be entered aside from the approach (enhanced); otherwise, numerical inputs and the three priority populations must be provided. Percentages will then auto-calculate within the Template based on the numeric values entered.

- **Category:** There are two categories on this Template: Total and Priority Populations

  - Total: These are the same numerical inputs that were calculated for Required Reporting Template A.

  - Priority Population: Use Column B, Category 2 and Column B, Category 4 to enter the three priority populations chosen by the jurisdiction. These need to be the same priority populations for both HIV surveillance and RWHAP data.

- **Numerical Inputs**

  - For HIV surveillance data, use Columns C, D, E, F, and G to enter the number of people living with diagnosed HIV infection (Column C), the number with a new diagnosis (Column D), late diagnosed HIV (Column E), unmet need (Column F), and in care not virally suppressed (Column G) for the total population as well as each Priority Population chosen.

  - For RWHAP data, use Columns C, F and G to enter the number of RWHAP clients (Column C), those with unmet need (Column F) and those in care not virally suppressed (Column G) for RWHAP clients as well as each Priority Population chosen.

- **Calculated Percentages:** In addition to the numbers, the Template requires percentage calculations. They are explained below.

  - Within Categories, HIV surveillance data: When the percentage is "within categories," the denominator is the number of people within the stated category (e.g. of all males living with diagnosed HIV infection, what percentage have an unmet need?). The calculations for each table for HIV surveillance data are listed below.

    o For % late diagnosed (Column H), the calculation is the number of people with late diagnosed HIV (Column E) divided by the number of people with new diagnoses in each category (Column D).

    o For % unmet need (Column I), the calculation is the number of people with an unmet need (Column F) divided by the number of people living with diagnosed HIV infection (Column C) for each category.

    o For % in care not virally suppressed (Column J), the calculation is the number of people in care not virally suppressed (Column G) divided by the number of people in care (calculated by using the number of people living with diagnosed HIV infection (Column C) minus the number of people with unmet need (Column F) for each category.

  - Within Categories, RWHAP data: When the percentage is "within categories," the denominator is the number of people within the stated category (e.g. of all male RWHAP clients, what percentage have an unmet need?). The calculations for each table for RWHAP data are listed below.

    o For % unmet need (Column I), the calculation is the number of people with an unmet need (Column F) divided by the number of RWHAP clients (Column C) for each category.

    o For % in care not virally suppressed (Column J), the calculation is the number of people in care not virally suppressed (Column G) divided by the number of people in care (calculated by using the number of RWHAP clients (Column C) minus the number of people with unmet need (Column F) for each category).

  - Across Categories, HIV surveillance data: Where the percentage is "across categories," the denominator is always the total number of people living with diagnosed HIV infection– the number in Row 1 of the appropriate Column. (e.g. of all people living with diagnosed HIV infection with an unmet need, what percentage are males?). The calculation for each table is listed below.

    o For % late diagnosed (Column K), the calculation is the number of people with late diagnosed HIV (Column E) for each category divided by the total number of people with late diagnosed HIV (Column E).

    o For % unmet need (Column L), the calculation is the number of people with an unmet need (Column F) for each category divided by the total number of people with an unmet need (Column F).

    o For % in care not virally suppressed (Column M), the calculation is the number of people in care not virally suppressed for each category (Column G) divided by the total number of people in care not virally suppressed (Column G).

  - Across Categories, RWHAP data: Where the percentage is "across categories," the denominator is always RWHAP clients– the number in Row 5 of the appropriate Column. (e.g. of all RWHAP clients with an unmet need, what percentage are males?). The

calculation for each table is listed below.

- o For % unmet need (Column L), the calculation is the number of RWHAP clients with an unmet need (Column F) for each category divided by RWHAP clients with an unmet need (Column F).

- o For % in care not virally suppressed (Column M), the calculation is the number of RWHAP clients in care not virally suppressed for each category (Column G) divided by the total number of RWHAP clients in care not virally suppressed (Column G).

4.6 Optional Calculation Tables 1A (HIV Surveillance Data) and 1B (RWHAP Data): Unmet Need Framework Inputs and Calculated Results

These Tables are provided for summarizing the inputs needed for estimates and calculating results related to late diagnoses, unmet need, and viral suppression. Use Table 1A for HIV surveillance data for all people living with diagnosed HIV infection in the jurisdiction. Use Table 1B for RWHAP data for RWHAP clients.

The description and instructions outlined below are specific for using the Word version of the Optional Calculation Tables provided in Appendix B with the respective calculation formulas as a reference. The Excel version of Optional Calculation Tables 1A and 1B auto-populate Reporting Template A-Unmet Need while Optional Calculation Tables 2A and 2B auto-populates Reporting Template B-Priority Populations.

4.6.1 Optional Calculation Table 1A-HIV Surveillance Data

This Table can be used for all the calculations for the *enhanced* estimates and analyses for HIV surveillance data. Note the definitions included in the table are summary definitions. *Please use the full definitions provided in the instructions below*.

Given that HIV surveillance data must be used , it is already listed in the Table in Column E as the data source. If linked databases are being used, additional data sources should be specified in the appropriate cells. Cells that are auto-calculated in the Excel version based on inputs are highlighted in yellow.

1. **Years of Data -** For the purposes of the calculations in this Table, two different time frames are used. All calculations with the exception of population size use the most recent calendar for which data are available, which should be the same year across calculations. For population size, the most recent five-year calendar for which data are available is used. Note that the last year of the most recent five-year period should be the same year as the most recent calendar year for which data are available.

A	B	C	D	E
Years of data				
1	**New Diagnoses:** Most recent calendar year for which data are available			
2	**Care Patterns:** Most recent calendar year for which data are available			
3	**Population size:** Most recent 5 calendar year period for which data are available			

- *New Diagnoses:* In Row 1, Column C, enter the most recent calendar year of data used for the estimates and analyses. The Excel version has a dropdown menu to choose the year.

- *Care Patterns:* In Row 2, Column C, enter the most recent calendar year of data used for the estimates and analyses. This should be the same year as new diagnoses. In the Excel version, the year chosen for new diagnoses auto-populates in Row 2, Column C.

- *Population Size:* In Row 3, Columns C and D, enter the first and last years of the five-year

period. The last year should be the same year as the year that was entered for new diagnoses and care patterns; the first year should be five years prior (e.g., 2010-2014). In the Excel version, the choice for Rows 1 and 2 will auto-populate the five-year period for Row 3, Columns C-D.

2. **Late Diagnosed** - There are two rows for late diagnosed:

A	B	C	D	E
	Definition/Description	Number	Percent	Data Source
Late Diagnosed				
4	**Late diagnoses:** Number of people with late diagnosed HIV in the most recent calendar year in the jurisdiction based on residence at time of diagnosis. Late diagnosed HIV is based on the first CD4 test result (<200 cells/mL or a CD4 percentage of total lymphocytes of <14) or documentation of an AIDS-defining condition ≤3 months after a diagnosis of HIV infection		C4/C5	HIV Surveillance data
5	**New diagnoses:** Number of people in the jurisdiction with HIV diagnosed in the most recent calendar year based on residence at time of diagnosis			

- *Late Diagnoses:* In Row 4 of the Calculation Table, enter the number of people with late diagnosed HIV based on residence at time of diagnosis. Late diagnoses provide additional understanding of how many people with HIV in the jurisdiction were not tested soon after becoming infected with HIV. As defined by the HRSA HAB Performance Measures and CDC, late diagnoses are the number and percent of people with HIV who know their status but were diagnosed with Stage 3 HIV (AIDS) within three months of their HIV diagnosis based on the first CD4 test result (<200 cells/mL or a CD4 percentage of total lymphocytes of <14) or documentation of an AIDS-defining condition ≤3 months after a diagnosis of HIV infection. If ≥2 events occurred during the same month and could thus qualify as "first," apply the same conditions applied by CDC[15]. It should be determined using HIV surveillance data.

  - *Number:* Specify the total number in Row 4, Column C

  - *Percentage*: Enter the percentage for Row 4, Column D using Row 4, Column C divided by Row 5, Column C. If using the Excel version, the percentage will be auto-calculated once Row 5 is populated.

- *New Diagnoses:* In Row 5, enter the number of people diagnosed with HIV infection in the most recent calendar year in the jurisdiction based on residence at time of diagnosis.

  - *Number:* Specify the total number in Row 5, Column C.

  - *Percentage*: There is no percentage required for this component.

3. **Population Size:** In Row 6, enter the total number of people living with diagnosed HIV infection in the jurisdiction based on most recent known address who had an HIV diagnosis or any other HIV-related lab data (e.g., CD4, VL, genotype, or HIV test even if already diagnosed) reported to the HIV surveillance program during the most recent five calendar year period.

A	B	C	D	E
	Definition/Description	Number	Percent	Data Source
Population Size				
6	**Population size:** Number of people living with diagnosed HIV infection in the jurisdiction based on most recent known address who had an HIV diagnosis or any other HIV-related lab data (e.g., CD4, VL, genotype, or HIV test even if already diagnosed) reported to the HIV surveillance program during the most recent five calendar year period			HIV Surveillance data

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[15] See glossary, under "late diagnoses" for more detail.

- *Number:* Specify the total number in Row 6, Column C.

- *Percentage*: There is no percentage required for this component.

4. **Care Patterns:** There are two rows for care patterns.

A	B	C	D	E
	Definition/Description	Number	Percent	Data Source
Care Patterns				
7	**Met need (In care):** Number of people living with diagnosed HIV infection in the jurisdiction based on most recent known address with a CD4 test or VL test in the most recent calendar year		C7/C6	HIV Surveillance data; if linked databases are used please specify[1]
8	**Unmet need:** Number of people living with diagnosed HIV infection in the jurisdiction based on most recent known address without any CD4 or VL test in the most recent calendar year		C8/C6	

- *Met Need:* In Row 7, enter the number of people living with diagnosed HIV infection in the jurisdiction based on most recent known address with at least one CD4 or VL test in the most recent calendar year.

  - *Number:* Specify the number of people with met need in Row 7, Column C.

  - *Percentage:* Enter the percentage in Row 7, Column D using Row 7, Column C divided by Row 6, Column C. If using the Excel version, the percentage in Row 7, Column D will auto-calculate.

  - *Data Source*: HIV surveillance data are the default listing in the data source for the enhanced approach. If linked databases are being used, list the additional database(s) in Row 7, Column E.

- *Unmet Need:* In Row 8, enter the number of people living with diagnosed HIV infection in the jurisdiction based on most recent known address without any CD4 or VL test in the most recent calendar year.

  - *Number:* Specify the number in Row 8, Column C. If using the Excel version, the number will auto-calculate using Row 6, Column C minus Row 7, Column C.

  - *Percentage*: Enter the percentage in Row 8, Column D using Row 8, Column C divided by Row 6, Column C. If using the Excel version, the percentage is auto-calculated.

  - *Data Source*: HIV surveillance data are the default listing in the data source for the enhanced approach. If linked databases are being used, list the additional database(s) in Row 8, Column E.

5. **In Care, Viral Suppression**: There are two rows for viral suppression:

A	B	C	D	E
	Definition/Description	Number	Percent	Data Source
In Care, Viral Suppression				
9	**Virally suppressed:** Number of people living with diagnosed HIV infection in the jurisdiction who are in care and whose most recent viral load test result was <200 copies/mL in the most recent calendar year		C9/C7	HIV Surveillance data; if linked databases are used please specify[1]
10	**Not virally suppressed:** Number of people living with diagnosed HIV infection in the jurisdiction who are in care and whose most recent viral load test result was ≥200 copies/mL in the most recent calendar year		C10/C7	

- *Virally Suppressed*: In Row 9, enter the number of people living with diagnosed HIV infection in the jurisdiction who are in care (met need) and were virally suppressed based on the most recent

viral load test result. For the purposes of the calculation, the threshold for suppression is <200 copies/mL, so virally suppressed is a result <200 copies/mL.

- *Number:* Specify the number of people in care and virally suppressed in Row 9, Column C.

- *Percentage:* Enter the percentage in Row 9, Column D using Row 9, Column C divided by Row 7, Column C. If using the Excel version, the percentage in Row 9, Column D is auto-calculated.

- *Data Source*: HIV surveillance data are the default listing in the data source for the enhanced approach. If linked databases are being used, list the additional database(s) in Row 9, Column E.

- ***Not Virally Suppressed:*** In Row 10, enter the number of people living with diagnosed HIV infection in the jurisdiction who are in care (met need) whose most recent viral load test result was ≥200 copies/mL.

- *Number:* Specify the number of people in care and not virally suppressed in Row 10, Column C. If using the Excel version, this number will auto-calculate using Row 7, Column C minus Row 9, Column C.

- *Percentage*: Enter the percentage in Row 10, Column D using Row 10, Column C divided by Row 7, Column C. If using the Excel version, the percentage in Row 10, Column D is auto-calculated.

- *Data Source*: HIV surveillance data are the default listing in the data source for the enhanced approach. If linked databases are being used, list the additional database(s) in Row 10, Column E.

4.6.2 Optional Calculation Table 1B-RWHAP Data

This Table can be used for calculations for the ***enhanced*** estimates and analyses for RWHAP data. Note the definitions included in the table are summary definitions. *Please use the full definitions provided in the instructions below.* Please include the sources of the data in the Data Source Column E.

1. **Year of Data:** For the purposes of the calculations in this Table, one time frame is used. Please note that the most recent calendar year used for RWHAP data must be the same as the most recent calendar year used for HIV surveillance data. If using the auto-populated Unmet Need Reporting Templates, the most recent calendar year chosen in Calculation Template 1A-HIV Surveillance Data will be automatically entered into Row 1, Column C.

A	B	C	D	E
Year of data				
1	**Care Patterns:** Most recent calendar year for which data are available			

2. **RWHAP Clients:** In Row 2, Column C, enter the total number of RWHAP clients in the jurisdiction who received any RWHAP or RWHAP-related funded service. If the RWHAP database includes data beyond what is required for the jurisdiction (for example, a RWHAP Part A jurisdiction that has

A	B	C	D	E
	Definition/Description	Number	Percent	Data Source
RWHAP Clients				
2	**RWHAP clients**: Number of RWHAP clients in the jurisdiction who received any RWHAP or RWHAP-related funded service in the most recent calendar year			RWHAP Database

RWHAP Part B data in their database), jurisdictions are not required to limit the data to just RWHAP Part A for the purposes of the calculation. In addition, jurisdictions are not expected to combine RWHAP databases across Parts.

- *Number:* Specify the total number in Row 2, Column C; this number will be used as the denominator for Rows 3 and 4, Column D. These numbers are automatically used in the auto-populated version of the template.

- *Percentage:* There is no percentage required for this component.

3. **Care Patterns:** There are two rows for care patterns.

- *Met Need:* In Row 3, Column C, enter the number of RWHAP clients in the jurisdiction with a CD4 test or VL test or OAHS visit[16]. The most recent calendar year for which data are available is the same year that was specified in Year of Data.

  - *Number:* Specify the number of people with met need in Row 3, Column C.

  - *Percentage:* Enter the percentage in Row 3, Column D using Row 3, Column C divided by Row 2, Column C. If using the Excel version, the percentage is auto-calculated.

A	B	C	D	E
	Definition/Description	Number	Percent	Data Source
Care Patterns				
3	**Met need (In care):** Number of RWHAP clients in the jurisdiction with a CD4 or VL test or OAHS visit[3] in the most recent calendar year		C3/C2	RWHAP Database; if linked databases are used please specify[2]
4	**Unmet need:** Number of RWHAP clients in the jurisdiction without any CD4, VL test or OAHS visit[3] in the most recent calendar year		C4/C2	

  - *Data Source*: RWHAP data are the default listing in the data source for the enhanced approach. If linked databases are being used, list the additional database(s) in Row 3, Column E.

- *Unmet Need:* In Row 4, enter the number of RWHAP clients in the jurisdiction without any of the following: CD4 test, VL test or OAHS visit[10]. The most recent calendar year for which data are available is the same year that was specified in Year of Data.

  - *Number*: Specify the number of people with met need in Row 4, Column C. If using the Excel version, the number will automatically calculate using Row 2, Column C minus Row 3, Column C.

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[16] Jurisdictions may choose to use other services to reflect HIV primary care. Any variation from the definitions should be clearly stated in the documentation.

- *Percentage:* Enter the percentage in Row 4, Column D using Row 4, Column C divided by Row 2, Column C. If using the Excel version, the percentage in Row 4, Column D is auto-calculated.

- *Data Source*: RWHAP data are the default listing in the data source for the enhanced approach. If linked databases are being used, list the additional database(s) in Row 4, Column E.

4. **Viral Suppression**: There are two rows for viral suppression.

A	B	C	D	E
	Definition/Description	Number	Percent	Data Source
In Care, Viral Suppression				
5	**Virally suppressed:** Number of RWHAP clients in the jurisdiction who are in care and whose most recent viral load test result was <200 copies/mL		C5/C3	RWHAP Database; if linked databases are used please specify[2]
6	**Not virally suppressed:** Number of RWHAP clients in the jurisdiction who are in care and whose most recent viral load test result was ≥200 copies/mL		C6/C3	

- ***In Care, Virally Suppressed:*** In Row 5, Column C, enter the number of RWHAP clients in the jurisdiction who are in care (met need) and were virally suppressed based on the most recent viral load test result. For the purposes of the calculation, the threshold for viral suppression is <200 copies/mL, so virally suppressed is a result <200 copies/mL.

  - *Number:* Specify the number of RWHAP clients in care and virally suppressed in Row 5, Column C.

  - *Percentage:* Enter the percentage in Row 6, Column D using Row 5, Column C divided by Row 3, Column C. If using the Excel version, the percentage in Row 5, Column D will auto-populate.

  - *Data Source*: RWHAP data are the default listing in the data source for the enhanced approach. If linked databases are being used, list the additional database(s) in Row 5, Column E.

- ***In Care, Not Virally Suppressed:*** In Row 6, enter the number of RWHAP clients in the jurisdiction who are in care (met need) whose most recent viral load test result was ≥200 copies/mL.

  - *Number:* Specify the number of RWHAP clients in care and not virally suppressed in Row 6, Column C.
  - *Percentage:* Enter the percentage in Row 5, Column D using Row 6, Column C divided by Row 3, Column C. If using the auto-calculated version, the percentage in Row 6, Column D will auto-populate.

  - *Data Source*: RWHAP data are the default listing in the data source for the enhanced approach. If linked databases are being used, list the additional database(s) in Row 6, Column E.

4.7 Optional Calculation Tables 2A and 2B: Priority Populations and Summary Subpopulation Analysis Results

Optional Calculation Tables 2A and 2B are provided for summarizing the characteristics of individuals in the jurisdiction. Priority populations are also included in the tables.

- Use **Optional Calculation Table 2A Subpopulation Analyses – HIV Surveillance** to provide priority populations and subpopulation analyses for all people living with diagnosed HIV infection in the jurisdiction, using the total numbers based on HIV surveillance data.

- Use **Optional Calculation Table 2B Subpopulation Analyses – RWHAP Clients** to provide priority populations and subpopulation analyses for RWHAP clients, using the total numbers based on RWHAP client data.

There is no single "correct" way to do subpopulation analyses or to present the results, and it is not required to use any particular table or reporting format. The Optional Calculations Tables in this subsection are provided for convenience. Using them has several benefits, including the following:

- **Available data:** The characteristics and categories included reflect the data reported in both the National HIV Surveillance System and the RSR, so jurisdictions already collect these data.

- **Field testing:** The table and suggested characteristics have been piloted and revised based on a field test involving a diverse group of four RWHAP Part A and four RWHAP Part B programs, as well as the voluntary involvement of another two RWHAP Part A and two RWHAP Part B jurisdictions.

Both Calculation Table 2A and 2B use the same approach of Columns with four groupings. Given this similarity, the instructions for the tables are presented together. Variation in specific categories is highlighted. Table 2A and 2B column headers are arranged in the following groupings:

- **Category:** Column B of Calculation Table 2A and Calculation Table 2B provide a Total row (Row 1) and then list six categories for subpopulation analyses: Current Gender Identity, Race/Ethnicity, Age, Transmission Category/HIV Risk Factor, Geographic Unit, and Priority Populations.

- **Totals**: Use Column C to provide totals for each table.
  - *Table 2A* – The total number of people living with diagnosed HIV infection and the total for each of the numerical inputs.
  - *Table 2B* – The total number of RWHAP clients and the total for each of the numerical inputs.

- **Numerical Inputs:** The numerical inputs vary based on the Calculation Table
  - *Table 2A*- The number of people with New Diagnoses, Late Diagnosed HIV, In Care, Unmet Need, and In Care Not Virally Suppressed for each subpopulation category and priority populations.
  - *Table 2B*- The number of RWHAP Clients In Care, with an Unmet Need and In Care Not Virally Suppressed for each subpopulation category and priority populations.

- **Calculated Percentages:** Calculations of percentages within and across categories are included because both are useful for planning. Formulas are included in the word version in Appendix B. If the Excel version of the tool is used, the percentages will auto-calculate.

  - *Table 2A***:** Percentages for Late Diagnosed HIV, Unmet Need, and In Care Not Virally Suppressed.

  - *Table 2B***:** Percentages for Unmet Need, and In Care Not Virally Suppressed.

- These are two types of calculated percentages: within and across.

  - **Within Categories**: The denominator is the total number of people within the stated category.

    - *Table 2A***:** The denominator is the number of people within the stated category (e.g. of all males living with diagnosed HIV infection, what percentage have an unmet need?)

    - *Table 2B***:** The denominator is the number of RWHAP clients within the stated category (e.g. of all male RWHAP clients, what percentage have an unmet need?)

  - **Across Categories**: The denominator is always the total number of people in Row 1 of the appropriate Column.

    - *Table 2A*: The denominator is always the total number of people living with diagnosed HIV infection (e.g. of all people living with diagnosed HIV infection with an unmet need, what percentage are males?)

    - *Table 2B:* The denominator is always the total number of RWHAP clients (e.g. of all RWHAP clients with an unmet need, what percentage are males?)

4.7.1 Optional Calculation Table 2A-Subpopulations HIV Surveillance Data and Calculations and Table 2B- RWHAP Data and Calculations

Following are instructions for using Optional Calculation Table 2A for HIV surveillance data and Optional Calculation Table 2B for RWHAP clients. Included are explanations for the categories and subcategories provided and instructions for completing the Table. Use these breakdowns where data permit; however, jurisdictions should ensure alignment with data privacy and confidentiality standards including suppression as needed due to small cell sizes.

Jurisdictions should ensure that these Tables can be used for the priority populations for *required* estimates and analyses as well as additional estimates and analyses that may be completed as part of *enhanced* estimates and analyses. If using version 1 of the Required Reporting Templates and Optional Calculation Tables, priority populate results will auto-populate in the Required Reporting Template B-Priority Populations. Cells that are auto-calculated based on inputs are highlighted in yellow.

Appendix B provides a Word version of Table 2A and 2B with calculation formulas. An Excel version is provided as part of the tools to support the implementation of the Framework. If using the Excel version, once the numbers have been entered, the Table will auto-calculate the percentages.

Detailed instructions regarding completing the table are listed below. Tables 2A and 2B are separately referenced when the instructions vary.

- **Category 1- Total:** These are the numbers for the totals and input categories for each Table. These are the same numbers for the respective categories that were used in the Required Reporting Templates. When completing the Tables, check to ensure that these numbers align.

Calculation Table 2A: Subpopulation Analyses – HIV Surveillance Data													
Jurisdiction Name:													
		Totals	Numerical Inputs					Auto-Calculated Percentages					
								Within Categories			Across Categories		
	Category	# of People Living with Diagnosed HIV Infection	# of New Diagnoses	# Late Diagnoses	# In Care	# Unmet Need	# In Care Not Virally Suppressed	% Late Diagnosed	% Unmet Need	% In Care Not Virally Suppressed	% Late Diagnosed	% Unmet Need	% In Care Not Virally Suppressed
A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Total							E1/D1	G1/C1	H1/F1	E1/E1	G1/G1	H1/H1

- *Table 2A* – Enter the total number of people living with diagnosed HIV infection (Row 1, Column C), New Diagnoses (Column D), Late Diagnosed HIV (Column E), In Care (Column F), Unmet Need (Column G), and In Care Not Virally Suppressed (Column H) for all categories.

- *Table 2B* – Enter the total number of RWHAP clients (Row 1, Column C), the number in Care (Column D), with an Unmet Need (Column E), and In Care Not Virally Suppressed (Column F) for all categories.

Table 2B: Subpopulation Analyses – RWHAP Data									
Jurisdiction Name:									
		Totals	Numerical Inputs			Auto-Calculated Percentages			
						Within Categories		Across Categories	
	Category	# of RWHAP Clients	# In Care	# Unmet Need	# In Care Not Virally Suppressed	% Unmet Need	% In Care Not Virally Suppressed	% Unmet Need	% In Care Not Virally Suppressed
A	B	C	D	E	F	G	H	I	J
1	Total					E1/C1	F1/D1	E1/E1	F1/F1

- **Category 2: Current Gender Identity [or Sex Assigned at Birth if Transgender data are not available]:** RWHAP data include current gender identity but HIV surveillance data may include only a person's sex assigned at birth. Efforts are underway nationally to improve collection and reporting of HIV surveillance data on current gender identity.[17] However, sometimes "information on gender identity (a person's internal understanding of his or her gender or the gender with which a person identifies) is not consistently collected or documented in the data sources used by HIV reporting jurisdictions."[18] If transgender data are not yet available or are incomplete in the jurisdiction, label and provide data on sex assigned at birth instead of current gender identity. Since 2014, the RSR has required reporting "*sex assigned at birth* (male or female) and *current gender* (male, female, or transgender)."[19] The RSR includes three transgender categories: male to female, female to male, and other. The National HIV Surveillance System uses male to female, female to male, and "other gender identity." **Table 2A** – Enter the number of people living with diagnosed HIV infection (Row 2, Column C), New Diagnoses (Column D), Late Diagnosed HIV (Column E), In Care (Column F), Unmet Need

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[17] Centers for Disease Control and Prevention, "HIV and Transgender Communities," Issue Brief, April 2019. See https://www.cdc.gov/hiv/pdf/policies/cdc-hiv-transgender-brief.pdf.

[18] HIV Surveillance Report, Volume 30, "Diagnoses of HIV Infection in the United States and Dependent Areas, 2018 *(Preliminary),*" p 13. See https://www.cdc.gov/hiv/pdf/library/reports/surveillance/cdc-hiv-surveillance-report-2018-vol-30.pdf.

[19] RWHAP Services Report, "Annual Client-Level Data Report, 2017." See https://hab.hrsa.gov/sites/default/files/hab/data/datareports/RWHAP-annual-client-level-data-report-2017.pdf.

(Column G), and In Care Not Virally Suppressed (Column H) by current gender identity subcategory.

Calculation Table 2A: Subpopulation Analyses – HIV Surveillance Data													
Jurisdiction Name:													
		Totals	Numerical Inputs					Auto-Calculated Percentages					
								Within Categories			Across Categories		
	Category	# of People Living with Diagnosed HIV Infection	# of New Diagnoses	# Late Diagnoses	# In Care	# Unmet Need	# In Care Not Virally Suppressed	% Late Diagnosed	% Unmet Need	% In Care Not Virally Suppressed	% Late Diagnosed	% Unmet Need	% In Care Not Virally Suppressed
A	B	C	D	E	F	G	H	I	J	K	L	M	N
2	CURRENT GENDER IDENTITY												
	Male							E2/D2	G2/C2	H2/F2	E2/E1	G2/G1	H2/H1
	Female							E2/D2	G2/C2	H2/F2	E2/E1	G2/G1	H2/H1
	Transgender							E2/D2	G2/C2	H2/F2	E2/E1	G2/G1	H2/H1

- **Table 2B** – Enter the number of RWHAP clients (Row 2, Column C), the number in Care (Column D), with an Unmet Need (Column E), and In Care Not Virally Suppressed (Column F) by current gender identity subcategory.

Table 2B: Subpopulation Analyses – RWHAP Data									
Jurisdiction Name:									
		Totals	Numerical Inputs			Auto-Calculated Percentages			
						Within Categories		Across Categories	
	Category	# of RWHAP Clients	# In Care	# Unmet Need	# In Care Not Virally Suppressed	% Unmet Need	% In Care Not Virally Suppressed	% Unmet Need	% In Care Not Virally Suppressed
A	B	C	D	E	F	G	H	I	J
2	CURRENT GENDER IDENTITY								
	Male					E2/C2	F2/D2	E2/E1	F2/F1
	Female					E2/C2	F2/D2	E2/E1	F2/F1
	Transgender					E2/C2	F2/D2	E2/E1	F2/F1

- **Category 3: Race/Ethnicity:** Race and ethnicity are collected separately in both HIV surveillance and RWHAP data. However, analytically these data are commonly presented together as race/ethnicity. Presenting individuals in one race or ethnicity category supports comparisons across groups and makes the data more useful for planning; it is also consistent with how both CDC and HRSA HAB present data. To clarify this approach, the race categories in the subpopulation analyses tables all specify "non-Hispanic" (e.g., White non-Hispanic, Asian non-Hispanic).

  - **Table 2A** – Enter the total number of people living with diagnosed HIV infection (Row 3, Column C), New Diagnoses (Column D), Late Diagnosed HIV (Column E), In Care (Column F), Unmet Need (Column G), and In Care Not Virally Suppressed (Column H) by race/ethnicity subcategory.

	Calculation Table 2A: Subpopulation Analyses – HIV Surveillance Data												
Jurisdiction Name:													
		Totals	Numerical Inputs					Auto-Calculated Percentages					
								Within Categories			Across Categories		
	Category	# of People Living with Diagnosed HIV Infection	# of New Diagnoses	# Late Diagnoses	# In Care	# Unmet Need	# In Care Not Virally Suppressed	% Late Diagnosed	% Unmet Need	% In Care Not Virally Suppressed	% Late Diagnosed	% Unmet Need	% In Care Not Virally Suppressed
A	B	C	D	E	F	G	H	I	J	K	L	M	N
3	RACE/ETHNICITY												
	American Indian/Alaska Native Non-Hispanic							E3/D3	G3/C3	H3/F3	E3/E1	G3/G1	H3/H1
	Asian Non-Hispanic							E3/D3	G3/C3	H3/F3	E3/E1	G3/G1	H3/H1
	Black/African American Non-Hispanic							E3/D3	G3/C3	H3/F3	E3/E1	G3/G1	H3/H1
	Hispanic/Latino							E3/D3	G3/C3	H3/F3	E3/E1	G3/G1	H3/H1
	Native Hawaiian/Pacific Islander Non-Hispanic							E3/D3	G3/C3	H3/F3	E3/E1	G3/G1	H3/H1
	White Non-Hispanic							E3/D3	G3/C3	H3/F3	E3/E1	G3/G1	H3/H1
	Multiple races Non-Hispanic							E3/D3	G3/C3	H3/F3	E3/E1	G3/G1	H3/H1
	Unknown							E3/D3	G3/C3	H3/F3	E3/E1	G3/G1	H3/H1

- **Table 2B** – Enter the total number of RWHAP clients (Row 3, Column C), the number in Care (Column D), with an Unmet Need (Column E), and In Care Not Virally Suppressed (Column F) by race/ethnicity subcategory.

	Table 2B: Subpopulation Analyses – RWHAP Data									
Jurisdiction Name:										
		Totals	Numerical Inputs			Auto-Calculated Percentages				
						Within Categories		Across Categories		
	Category	# of RWHAP Clients	# In Care	# Unmet Need	# In Care Not Virally Suppressed	% Unmet Need	% In Care Not Virally Suppressed	% Unmet Need	% In Care Not Virally Suppressed	
A	B	C	D	E	F	G	H	I	J	
3	RACE/ETHNICITY									
	American Indian/Alaska Native Non-Hispanic					E3/C3	F3/D3	E3/E1	F3/F1	
	Asian Non-Hispanic					E3/C3	F3/D3	E3/E1	F3/F1	
	Black/African American Non-Hispanic					E3/C3	F3/D3	E3/E1	F3/F1	
	Hispanic/Latino					E3/C3	F3/D3	E3/E1	F3/F1	
	Native Hawaiian/Pacific Islander Non-Hispanic					E3/C3	F3/D3	E3/E1	F3/F1	
	White Non-Hispanic					E3/C3	F3/D3	E3/E1	F3/F1	
	Multiple races Non-Hispanic					E3/C3	F3/D3	E3/E1	F3/F1	
	Unknown					E3/C3	F3/D3	E3/E1	F3/F1	

- **Category 4: Age:** The age breakdowns listed in the detailed table are used in RSR reporting (<13, 13-24, 24-35, 35-44, 45-54, 55-64, and 65+). HIV surveillance reports typically use narrower categories (<13, 13-14, and then 5-year groupings of 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60-64, then 65+). Choose the set of age categories the jurisdiction considers most useful for planning but use the same categories for both Table 2A and Table 2B. Age should be the current age as of the end of the year for which data are provided, with the exception of New Diagnoses (Table 2A only) which should reflect age at time of diagnosis.

  - **Table 2A** – Enter the total number of people living with diagnosed HIV infection (Row 4, Column C), New Diagnoses (Column D), Late Diagnosed HIV (Column E), In Care (Column F), Unmet Need (Column G), and In Care Not Virally Suppressed (Column H) by age grouping.

Calculation Table 2A: Subpopulation Analyses – HIV Surveillance Data													
Jurisdiction Name:													
		Totals	Numerical Inputs					Auto-Calculated Percentages					
								Within Categories			Across Categories		
	Category	# of People Living with Diagnosed HIV Infection	# of New Diagnoses	# Late Diagnoses	# In Care	# Unmet Need	# In Care Not Virally Suppressed	% Late Diagnosed	% Unmet Need	% In Care Not Virally Suppressed	% Late Diagnosed	% Unmet Need	% In Care Not Virally Suppressed
A	B	C	D	E	F	G	H	I	J	K	L	M	N
4	AGE												
	<13[4]							E4/D4	G4/C4	H4/F4	E4/E1	G4/G1	H4/H1
	13-24							E4/D4	G4/C4	H4/F4	E4/E1	G4/G1	H4/H1
	25-34							E4/D4	G4/C4	H4/F4	E4/E1	G4/G1	H4/H1
	35-44							E4/D4	G4/C4	H4/F4	E4/E1	G4/G1	H4/H1
	45-54							E4/D4	G4/C4	H4/F4	E4/E1	G4/G1	H4/H1
	55-64							E4/D4	G4/C4	H4/F4	E4/E1	G4/G1	H4/H1
	65+							E4/D4	G4/C4	H4/F4	E4/E1	G4/G1	H4/H1

- ▪ **Table 2B** – Enter the total number of RWHAP clients (Row 4, Column C), the number in Care (Column D), with an Unmet Need (Column E), and In Care Not Virally Suppressed (Column F) by age grouping.

Table 2B: Subpopulation Analyses – RWHAP Data									
Jurisdiction Name:									
		Totals	Numerical Inputs			Auto-Calculated Percentages			
						Within Categories		Across Categories	
	Category	# of RWHAP Clients	# In Care	# Unmet Need	# In Care Not Virally Suppressed	% Unmet Need	% In Care Not Virally Suppressed	% Unmet Need	% In Care Not Virally Suppressed
A	B	C	D	E	F	G	H	I	J
4	AGE								
	<13					E4/C4	F4/D4	E4/E1	F4/F1
	13-24					E4/C4	F4/D4	E4/E1	F4/F1
	25-34					E4/C4	F4/D4	E4/E1	F4/F1
	35-44					E4/C4	F4/D4	E4/E1	F4/F1
	45-54					E4/C4	F4/D4	E4/E1	F4/F1
	55-64					E4/C4	F4/D4	E4/E1	F4/F1
	65+					E4/C4	F4/D4	E4/E1	F4/F1

- **Category 5: Transmission Category/HIV Risk Factor:** The transmission categories shown in Tables 2A and 2B are used in both HIV surveillance and RWHAP data. Transmission categories are distinct for male, female, and transgender individuals. All transmission categories are collected for both HIV surveillance and RWHAP data; both use the same hierarchy to assign all individuals to only one category when presenting data analytically[20,21]. For males, the categories are male-to-male sexual contact, injection drug use, male-to-male sexual contact and injection drug use, heterosexual contact, and other. For females, the categories are injection drug use, heterosexual contact, and other. For transgender persons,

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[20]   Centers for Disease Control and Prevention, "Estimated HIV Incidence and Prevalence in the United States, 2010-2016," Volume 24, Number 1, February 2019. Transmission categories, p 13. See https://www.cdc.gov/hiv/pdf/library/reports/surveillance/cdc-hiv-surveillance-supplemental-report-vol-24-1.pdf.

[21]   Health Resources and Services Administration. Ryan White HIV/AIDS Program Annual Client-Level Data Report 2018. http://hab.hrsa.gov/data/data-reports. Published December 2019. See https://hab.hrsa.gov/sites/default/files/hab/data/datareports/RWHAP-annual-client-level-data-report-2018.pdf

the categories include sexual contact, injection drug use, sexual contact and injection drug use, and other. [22] The "other" category combines hemophilia, blood transfusion, perinatal exposure, and risk factor not reported or not identified, as well as other factors such as occupational exposure. Based on the number of people with perinatal exposure and/or risk factor not reported or not identified, jurisdictions may choose to report data separately for these subcategories.

- **Table 2A** – Enter the total number of people living with diagnosed HIV infection (Row 5, Column C), New Diagnoses (Column D), Late Diagnosed HIV (Column E), In Care (Column F), Unmet Need (Column G), and In Care Not Virally Suppressed (Column H) by transmission category and gender for each category.

Calculation Table 2A: Subpopulation Analyses – HIV Surveillance Data

Jurisdiction Name:

		Totals	Numerical Inputs					Auto-Calculated Percentages					
								Within Categories			Across Categories		
	Category	# of People Living with Diagnosed HIV Infection	# of New Diagnoses	# Late Diagnoses	# In Care	# Unmet Need	# In Care Not Virally Suppressed	% Late Diagnosed	% Unmet Need	% In Care Not Virally Suppressed	% Late Diagnosed	% Unmet Need	% In Care Not Virally Suppressed
A	B	C	D	E	F	G	H	I	J	K	L	M	N
5	TRANSMISSION CATEGORY/HIV RISK FACTOR												
	Male:												
	Male to male sexual contact							E5/D5	G5/C5	H5/F5	E5/E1	G5/G1	H5/H1
	Injection drug use (IDU)							E5/D5	G5/C5	H5/F5	E5/E1	G5/G1	H5/H1
	Male to male sexual contact & IDU							E5/D5	G5/C5	H5/F5	E5/E1	G5/G1	H5/H1
	Heterosexual contact							E5/D5	G5/C5	H5/F5	E5/E1	G5/G1	H5/H1
	Other/No Identified Risk							E5/D5	G5/C5	H5/F5	E5/E1	G5/G1	H5/H1
	Female:												
	Injection drug use							E5/D5	G5/C5	H5/F5	E5/E1	G5/G1	H5/H1
	Heterosexual contact							E5/D5	G5/C5	H5/F5	E5/E1	G5/G1	H5/H1
	Other/No Identified Risk							E5/D5	G5/C5	H5/F5	E5/E1	G5/G1	H5/H1
	Transgender:												
	Sexual contact							E5/D5	G5/C5	H5/F5	E5/E1	G5/G1	H5/H1
	Injection drug use							E5/D5	G5/C5	H5/F5	E5/E1	G5/G1	H5/H1
	Sexual contact & IDU							E5/D5	G5/C5	H5/F5	E5/E1	G5/G1	H5/H1
	Other/No Identified Risk							E5/D5	G5/C5	H5/F5	E5/E1	G5/G1	H5/H1

- **Table 2B** – Enter the total number of RWHAP clients (Row 5, Column C), the number in Care (Column D), with an Unmet Need (Column E), and In Care Not Virally Suppressed (Column F) by transmission category and gender for each category.

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[22]   *Ibid.*

		Totals	Numerical Inputs			Auto-Calculated Percentages			
Table 2B: Subpopulation Analyses – RWHAP Data									
Jurisdiction Name:									
						Within Categories		Across Categories	
	Category	# of RWHAP Clients	# In Care	# Unmet Need	# In Care Not Virally Suppressed	% Unmet Need	% In Care Not Virally Suppressed	% Unmet Need	% In Care Not Virally Suppressed
A	B	C	D	E	F	G	H	I	J
5	TRANSMISSION CATEGORY/HIV RISK FACTOR								
	Male:								
	Male to male sexual contact					E5/C5	F5/D5	E5/E1	F5/F1
	Injection drug use (IDU)					E5/C5	F5/D5	E5/E1	F5/F1
	Male to male sexual contact & IDU					E5/C5	F5/D5	E5/E1	F5/F1
	Heterosexual contact					E5/C5	F5/D5	E5/E1	F5/F1
	Other/No Identified Risk					E5/C5	F5/D5	E5/E1	F5/F1
	Female:								
	Injection drug use (IDU)					E5/C5	F5/D5	E5/E1	F5/F1
	Heterosexual contact					E5/C5	F5/D5	E5/E1	F5/F1
	Other/No Identified Risk					E5/C5	F5/D5	E5/E1	F5/F1
	Transgender:								
	Sexual contact					E5/C5	F5/D5	E5/E1	F5/F1
	Injection drug use (IDU)					E5/C5	F5/D5	E5/E1	F5/F1
	Sexual contact & IDU					E5/C5	F5/D5	E5/E1	F5/F1
	Other/No Identified Risk					E5/C5	F5/D5	E5/E1	F5/F1

- **Category 6: Geographic Unit:** Both HIV surveillance and RWHAP data include most recent known address, including street address, county, city, state, and zip code. Choose and include geographic breakdowns that will be useful in local planning; HIV surveillance data also includes residence at time of diagnosis for new diagnoses. Commonly used categories include HIV or health planning area/district, county, city, neighborhood, and/or zip code. Some jurisdictions prefer to use a combination of categories. For example, a state might separately report high-incidence cities or counties and groups of low-incidence counties, rather than only using large health districts that include both low-incidence and high-incidence jurisdictions. A multi-county RWHAP Part A jurisdiction might report data by county but also include data for the central city or for several high-incidence cities in the EMA or TGA. A single-county RWHAP Part A jurisdiction might separately present data for the central city and also provide data for each health district or planning area. Such an approach ensures that rural data don't get "lost" by being combined with data from a high-incidence county or city that may be in the same health district.
Table 2A – Enter the total number of people living with diagnosed HIV infection (Row 6, Column C), New Diagnoses (Column D), Late Diagnosed HIV (Column E), In Care (Column F), Unmet Need (Column G), and In Care Not Virally Suppressed (Column H) by geographic unit.

Calculation Table 2A: Subpopulation Analyses – HIV Surveillance Data													
Jurisdiction Name:													
		Totals	Numerical Inputs					Auto-Calculated Percentages					
								Within Categories			Across Categories		
	Category	# of People Living with Diagnosed HIV Infection	# of New Diagnoses	# Late Diagnoses	# In Care	# Unmet Need	# In Care Not Virally Suppressed	% Late Diagnosed	% Unmet Need	% In Care Not Virally Suppressed	% Late Diagnosed	% Unmet Need	% In Care Not Virally Suppressed
A	B	C	D	E	F	G	H	I	J	K	L	M	N
6	Geographic Unit (Determined by jurisdiction)												
	Health Planning Area #1							E6/D6	G6/C6	H6/F6	E6/E1	G6/G1	H6/H1
	Health Planning Area #2							E6/D6	G6/C6	H6/F6	E6/E1	G6/G1	H6/H1
	Health Planning Area #3							E6/D6	G6/C6	H6/F6	E6/E1	G6/G1	H6/H1
	Health Planning Area #4							E6/D6	G6/C6	H6/F6	E6/E1	G6/G1	H6/H1
	Health Planning Area #5							E6/D6	G6/C6	H6/F6	E6/E1	G6/G1	H6/H1
	Health Planning Area #6							E6/D6	G6/C6	H6/F6	E6/E1	G6/G1	H6/H1
	Health Planning Area #7							E6/D6	G6/C6	H6/F6	E6/E1	G6/G1	H6/H1
	Unknown							E6/D6	G6/C6	H6/F6	E6/E1	G6/G1	H6/H1

- **Table 2B** – Enter the total number of RWHAP clients (Row 6, Column C), the number in Care (Column D), with an Unmet Need (Column E), and In Care Not Virally Suppressed (Column F) by geographic unit.

Table 2B: Subpopulation Analyses – RWHAP Data									
Jurisdiction Name:									
		Totals	Numerical Inputs			Auto-Calculated Percentages			
						Within Categories		Across Categories	
	Category	# of RWHAP Clients	# In Care	# Unmet Need	# In Care Not Virally Suppressed	% Unmet Need	% In Care Not Virally Suppressed	% Unmet Need	% In Care Not Virally Suppressed
A	B	C	D	E	F	G	H	I	J
6	**GEOGRAPHIC UNIT (Determined by jurisdiction)**								
	Health Planning Area #1					E6/C6	F6/D6	E6/E1	F6/F1
	Health Planning Area #2					E6/C6	F6/D6	E6/E1	F6/F1
	Health Planning Area #3					E6/C6	F6/D6	E6/E1	F6/F1
	Health Planning Area #4					E6/C6	F6/D6	E6/E1	F6/F1
	Health Planning Area #5					E6/C6	F6/D6	E6/E1	F6/F1
	Health Planning Area #6					E6/C6	F6/D6	E6/E1	F6/F1
	Health Planning Area #7					E6/C6	F6/D6	E6/E1	F6/F1
	Unknown					E6/C6	F6/D6	E6/E1	F6/F1

- **Category 7: Priority Population:** The Unmet Need Required Reporting Template asks for information on three key priority populations. It is up to the jurisdiction to choose the populations and the criteria to use in selecting these populations. For example, these may be the same populations prioritized under EIIHA and/or MAI although this is not required. The jurisdiction might choose groups that need special attention as emerging and/or disproportionately impacted populations, based on factors such as high rates of new HIV diagnoses, high rates of late diagnosed HIV, low rates of viral suppression, delays in linkage to care, and/or challenges in retention in care and treatment adherence. Often, these populations are defined based on multiple characteristics (such as race/ethnicity, age, and gender) or life situations/co-occurring conditions (e.g., recent incarceration, injection drug use, and/or unstable housing). For these detailed subpopulation tables, the jurisdiction can include more than three populations. However, three of the priority populations must be the same as what were used for HIV surveillance data (the same in both Table 2A and Table 2B). However, a jurisdiction may also include priority populations only for the RWHAP client analysis, such as RWHAP clients who are homeless or unstably housed.

- **Table 2A** – Enter the total number of people living with diagnosed HIV infection (Row 7, Column C), New Diagnoses (Column D), Late Diagnosed HIV (Column E), In Care (Column F), Unmet Need (Column G), and In Care Not Virally Suppressed (Column H) for three priority populations.

Calculation Table 2A: Subpopulation Analyses – HIV Surveillance Data														
Jurisdiction Name:														
		Totals	Numerical Inputs					Auto-Calculated Percentages						
								Within Categories			Across Categories			
	Category	# of People Living with Diagnosed HIV Infection	# of New Diagnoses	# Late Diagnoses	# In Care	# Unmet Need	# In Care Not Virally Suppressed	% Late Diagnosed	% Unmet Need	% In Care Not Virally Suppressed	% Late Diagnosed	% Unmet Need	% In Care Not Virally Suppressed
A	B	C	D	E	F	G	H	I	J	K	L	M	N
7	PRIORITY POPULATIONS (Determined by jurisdiction)												
	Priority Population #1							E7/D7	G7/C7	H7/F7	E7/E1	G7/G1	H7/H1
	Priority Population #2							E7/D7	G7/C7	H7/F7	E7/E1	G7/G1	H7/H1
	Priority Population #3							E7/D7	G7/C7	H7/F7	E7/E1	G7/G1	H7/H1

- **Table 2B** – Enter the total number of RWHAP clients (Row 7, Column C), the number in Care (Column D), with an unmet need (Column E), and In Care Not Virally Suppressed (Column F) for three priority populations.

Table 2B: Subpopulation Analyses – RWHAP Data									
Jurisdiction Name:									
		Totals	Numerical Inputs			Auto-Calculated Percentages			
						Within Categories		Across Categories	
	Category	# of RWHAP Clients	# In Care	# Unmet Need	# In Care Not Virally Suppressed	% Unmet Need	% In Care Not Virally Suppressed	% Unmet Need	% In Care Not Virally Suppressed
A	B	C	D	E	F	G	H	I	J
7	PRIORITY POPULATIONS (Determined by jurisdiction)								
	Priority Population #1					E7/C7	F7/D7	F7/F1	F7/F1
	Priority Population #2					E7/C7	F7/D7	F7/F1	F7/F1
	Priority Population #3					E7/C7	F7/D7	F7/F1	F7/F1
Items in yellow reflect cells that will auto calculate when data are entered into the other cells									

- **Calculation Percentages:** Calculations of percentages within and across categories are included because both are useful for planning.

  - Within Categories: The denominator is the number of people within the stated category (e.g. of all males living with diagnosed HIV infection, what percentage have an unmet need?). The calculation for each table is listed below.

    o **Table 2A**- The three calculations are completed as follows:

      - For % late diagnosed (Column I), the calculation is the number of people with late diagnosed HIV (Column E) divided by the number of people with new diagnoses in each category (Column D) for each category.

      - For % unmet need (Column J), the calculation is the number of people with an unmet need (Column G) divided by the number of people living with diagnosed HIV infection (Column C) for each category.

      - For % in care not virally suppressed (Column K), the calculation is the number of people in care not virally suppressed (Column H) divided by the number of people in care (Column F) for each category.

		Totals	Numerical Inputs					Auto-Calculated Percentages					
Calculation Table 2A: Subpopulation Analyses – HIV Surveillance Data													
Jurisdiction Name:													
								Within Categories			**Across Categories**		
	Category	# of People Living with Diagnosed HIV Infection	# of New Diagnoses	# Late Diagnoses	# In Care	# Unmet Need	# In Care Not Virally Suppressed	% Late Diagnosed	% Unmet Need	% In Care Not Virally Suppressed	% Late Diagnosed	% Unmet Need	% In Care Not Virally Suppressed
A	B	C	D	E	F	G	H	I	J	K	L	M	N

- **Table 2B** – The two calculations are completed as follows:
  - For % unmet need (Column G), the calculation is the number of people with an unmet need (Column E) divided by the number of RWHAP clients (Column C) for each category.
  - For % in care not virally suppressed (Column H), the calculation is the number of people in care not virally suppressed (Column F) divided by the number of RWHAP clients in care (Column D) for each category.

		Totals	Numerical Inputs			Auto-Calculated Percentages			
Table 2B: Subpopulation Analyses – RWHAP Data									
Jurisdiction Name:									
						Within Categories		**Across Categories**	
	Category	# of RWHAP Clients	# In Care	# Unmet Need	# In Care Not Virally Suppressed	% Unmet Need	% In Care Not Virally Suppressed	% Unmet Need	% In Care Not Virally Suppressed
A	B	C	D	E	F	G	H	I	J

- Across Categories: The denominator is always the total number of people living with diagnosed HIV infection or the total number of RWHAP clients – the number in Row 1 of the appropriate Column. (e.g., of all RWHAP clients with an unmet need, what percentage are males?). The calculation for each table is listed below.
  - **Table 2A**- The three calculations are completed as follows:
    - For % late diagnosed (Column L), the calculation is the number of people with late diagnosed HIV (Column E) for each category divided by the total number of people with late diagnosed HIV (Column E).
    - For % unmet need (Column M), the calculation is the number of people with an unmet need (Column G) for each category divided by the total number of people with an unmet need (Column G).
    - For % in care not virally suppressed (Column N), the calculation is the number of people in care not virally suppressed for each category (Column H) divided by the total number of people in care not virally suppressed (Column H).

		Totals	Numerical Inputs					Auto-Calculated Percentages					
Calculation Table 2A: Subpopulation Analyses – HIV Surveillance Data													
Jurisdiction Name:													
								Within Categories			**Across Categories**		
	Category	# of People Living with Diagnosed HIV Infection	# of New Diagnoses	# Late Diagnoses	# In Care	# Unmet Need	# In Care Not Virally Suppressed	% Late Diagnosed	% Unmet Need	% In Care Not Virally Suppressed	% Late Diagnosed	% Unmet Need	% In Care Not Virally Suppressed
A	B	C	D	E	F	G	H	I	J	K	L	M	N

- o **Table 2B** – The two calculations are completed as follows:
  - For % unmet need (Column I), the calculation is the number with an unmet need for each category (Column E) divided by the total number of people with an unmet need (Column E).

		Totals	Numerical Inputs			Auto-Calculated Percentages			
						Within Categories		Across Categories	
	Category	# of RWHAP Clients	# In Care	# Unmet Need	# In Care Not Virally Suppressed	% Unmet Need	% In Care Not Virally Suppressed	% Unmet Need	% In Care Not Virally Suppressed
A	B	C	D	E	F	G	H	I	J

Table 2B: Subpopulation Analyses – RWHAP Data
Jurisdiction Name:

- For % in care not virally suppressed (Column J), the calculation is the number of people in care not virally suppressed for each category (Column F) divided by the total number of people in care not virally suppressed (Column F).

Appendices

Appendix A: Unmet Need Glossary

RWHAP ADAP	The Ryan White HIV/AIDS Program (RWHAP) AIDS Drug Assistance Program (ADAP) is a state and territory-administered program authorized under RWHAP Part B that provides FDA-approved medications to low-income people with HIV who have limited or no health coverage from private insurance, Medicaid, or Medicare. RWHAP ADAP funds may also be used to purchase health insurance for eligible clients and for services that enhance access to, adherence to, and monitoring of drug treatments.
CAREWare	CAREWare is a free, electronic health and social support services information system for HRSA's Ryan White HIV/AIDS Program recipients and providers.
CDC	Centers for Disease Control and Prevention
Data to Care	Data to Care is a public health strategy that provides a framework for health departments who want to use HIV surveillance data to identify people with HIV and link them to medical care and other services.
eHARS	The enhanced HIV/AIDS Reporting System (eHARS) is a browser-based data collection and management tool. The CDC's National HIV Surveillance System maintains information on persons diagnosed with HIV infection and reported to the CDC by local and state HIV surveillance programs using eHARS.
Ending the HIV Epidemic: A Plan for America	A ten-year initiative beginning in FY 2020 to achieve the important goal of reducing new HIV infections to less than 3,000 per year by 2030. Reducing new infections to this level would essentially mean that HIV transmissions would be rare and meet the definition of ending the epidemic.
HAB	HIV/AIDS Bureau. The Department of Health and Human Services (HHS) Bureau within HRSA that is responsible for administering RWHAP. Within HRSA HAB, the Division of Metropolitan HIV/AIDS Programs administers RWHAP Part A; the Division of State HIV/AIDS Programs administers RWHAP Part B and the RWHAP AIDS Drug Assistance Program (ADAP); the Division of Community HIV/AIDS Programs administers RWHAP Part C, D, the RWHAP Part F Dental Reimbursement Program, and the RWHAP Part F Community-Based Dental Partnership Program; and the Office of Training and Capacity Development administers the RWHAP Part F AIDS Education and Training Centers Program and the RWHAP Part F Special Projects of National Significance Program. HAB's Division of Policy and Data administers HIV evaluation studies, the Ryan White HIV/AIDS Program Services Report, the RWHAP ADAP Data Report, the Dental Services Report, the Allocation and Expenditure Reports, HIV Quality Measures Module, and the AIDS Education and Training Centers Reports.

HRSA	Health Resources and Services Administration. A federal public health agency that is part of HHS responsible for directing national health programs that improve the nation's health by assuring equitable access to comprehensive, quality healthcare for all. HRSA works to improve and extend life for people with HIV, provides primary healthcare to medically underserved people, serves women and children through State programs, and trains a health workforce that is both diverse and motivated to work in underserved communities. HRSA administers the RWHAP.
IHAP	The Integrated HIV/AIDS Planning (IHAP) TA Center is available to RHWAP Part A and B recipients, including help on how to select priority populations and use data from Unmet Need. Their TA Center can be contacted here.
Late Diagnoses	The number of people who were diagnosed with Stage 3 HIV (AIDS) within three months of their HIV diagnosis based on the first CD4 test result (<200 cells/mL or a CD4 percentage of total lymphocytes of <14) or documentation of an AIDS-defining condition ≤3 months after a diagnosis of HIV infection. If ≥2 events occurred during the same month and could thus qualify as "first," the following conditions should be applied: 1) If an AIDS-defining condition is documented, the AIDS-defining condition should be used; 2) if a CD4 count or a CD4 percentage has been reported and an AIDS-defining condition is documented, the AIDS-defining condition should be used. 3) If an AIDS-defining condition was not documented, but a CD4 count and a CD4 percentage has been reported, the CD4 count should be used. 4) If an AIDS-defining condition was not documented, but >1 CD4 count had been reported, the lowest CD4 count (indicative of the most severe disease state) should be used. 5) If an AIDS-defining condition is not documented and a CD4 count has not been reported, but a CD4 percentage had been reported, the CD4 percentage should be used. If >1 CD4 percentage was reported, the lowest CD4 percentage (indicative of the most severe disease state) should be used.
NHSS	CDC'S National HIV Surveillance System (NHSS) is the primary source for monitoring HIV trends in the United States. CDC funds and assists state and local health departments to collect the information. Health departments report de-identified data to CDC so that information from around the country can be analyzed to determine who is being affected and why.
OAHS	Outpatient/Ambulatory Health Services (a Ryan White service category)
Part A	The Part of RWHAP that provides direct financial assistance to designated EMAs/TGAs who have been the most severely affected by the HIV epidemic. The purpose of these funds is to deliver or enhance HIV-related core medical and support services to people with HIV.
Part B	The Part of RWHAP that authorizes the distribution of federal funds to States and territories to improve the quality, availability, and delivery of core medical and support services for people with HIV. RWHAP emphasizes that such care and support is part of a coordinated continuum of care designed to improve medical outcomes.

Planning CHATT	The Planning Community HIV/AIDS Technical Assistance and Training project (Planning CHATT) is available to Part A planning councils and bodies for training and technical assistance. They can be contacted here.
PSRA	Priority setting and resource allocation. The Part A process of deciding which HIV/AIDS services are the most important in providing a comprehensive system of care for all people with HIV in the EMA/TGA.
RWHAP	The Health Resources and Services Administration's (HRSA) **Ryan White HIV/AIDS Program** (RWHAP) provides a comprehensive system of HIV primary medical care, essential support services, and medications for low-income people with HIV who are uninsured and underserved. The Program funds grants to states, cities/counties, and local community-based organizations to provide care and treatment services to people with HIV to improve health outcomes and reduce HIV transmission among hard-to-reach populations.
RWHAP funded service	A service paid for with Ryan White HIV/AIDS Program funds.
RWHAP-related funded service	A service paid for with RHWAP-related pharmaceutical rebates or program income.
RSR	RWHAP Services Report (RSR)
TargetHIV	The TargetHIV website is the central home for technical assistance (TA) for the RWHAP
Viral load (VL)	In relation to HIV, the quantity of HIV RNA in the blood. Viral load (VL) is used as a predictor of disease progression. Viral load test results are expressed as the number of copies per milliliter of blood plasma.

Appendix B: Word Tables With Calculation Formulas
B.1 Required Reporting Template A-Unmet Need

Reporting Template A - Unmet Need					
Jurisdiction Name:				**Approach?**	
				Linked Databases Used?	
Definition/Description		Number	Percent	Data Source	Year(s) of Data
A	**B**	**C**	**D**	**E**	**F**
HIV SURVEILLANCE DATA					
Late Diagnosed					
1	**Late diagnoses:** Number of people with late diagnosed HIV in the most recent calendar year in the jurisdiction based on residence at time of diagnosis. Late diagnosed HIV is based on the first CD4 test result (<200 cells/mL or a CD4 percentage of total lymphocytes of <14) or documentation of an AIDS-defining condition ≤3 months after a diagnosis of HIV infection		C1/C2	HIV Surveillance data	
2	**New diagnoses:** Number of people in the jurisdiction with HIV diagnosed in the most recent calendar year based on residence at time of diagnosis		■		
Unmet Need					
3	**Unmet need:** Number of people living with diagnosed HIV infection in the jurisdiction based on most recent known address without any CD4 or VL test in the most recent calendar year		C3/C4	HIV Surveillance data; if linked databases are used please specify[1]	
4	**Population size:** Number of people living with diagnosed HIV infection in the jurisdiction based on most recent known address who had an HIV diagnosis or any other HIV-related lab data (e.g., CD4, VL, genotype, or HIV test even if already diagnosed) reported to the HIV surveillance program during the most recent five calendar year period		■	HIV Surveillance data	
In Care, Not Virally Suppressed					
5	**Not virally suppressed:** Number of people living with diagnosed HIV infection in the jurisdiction who are in care and whose most recent viral load test result was ≥200 copies/mL in the most recent calendar year		C5/ (C4-C3)	HIV Surveillance data; if linked databases are used please specify[1]	
RYAN WHITE HIV/AIDS PROGRAM (RWHAP) DATA					
Unmet Need					
6	**Unmet need:** Number of RWHAP clients in the jurisdiction without any CD4, VL test or OAHS visit[3] in the most recent calendar year		C6/C7	RWHAP Database; if linked databases are used please specify[2]	
7	**RWHAP clients:** Number of RWHAP clients in the jurisdiction who received any RWHAP or RWHAP-related funded service in the most recent calendar year		■	RWHAP data	
In Care, Not Virally Suppressed					
8	**Not virally suppressed:** Number of RWHAP clients in the jurisdiction who are in care and whose most recent viral load test result was ≥200 copies/mL in the most recent calendar year		C8/(C7-C6)	RWHAP Database; if linked databases are used please specify[2]	

B.2 Required Reporting Template B-Priority Populations

Reporting Template B - Priority Populations												
Jurisdiction Name:											**Approach?**	
	Category	**Totals**	**Numerical Inputs**				**Auto-Calculated Percentages**					
							Within Categories			**Across Categories**		
		# of People Living with Diagnosed HIV Infection	# New Diagnoses	# Late Diagnoses	# Unmet Need	# In Care, Not Virally Suppressed	% Late Diagnosed	% Unmet Need	% In Care, Not Virally Suppressed	% Late Diagnosed	% Unmet Need	% In Care, Not Virally Suppressed
A	B	C	D	E	F	G	H	I	J	K	L	M
HIV SURVEILLANCE DATA												
1	Total						E1/D1	F1/C1	G1/(C1-F1)	E1/E1	F1/F1	G1/G1
2	**PRIORITY POPULATIONS (Determined by Jurisdiction)**											
	Priority Population #1						E2/D2	F2/C2	G2/(C2-F2)	E2/E1	F2/F1	G2/G1
	Priority Population #2						E2/D2	F2/C2	G2/(C2-F2)	E2/E1	F2/F1	G2/G1
	Priority Population #3						E2/D2	F2/C2	G2/(C2-F2)	E2/E1	F2/F1	G2/G1

RYAN WHITE HIV/AIDS PROGRAM (RWHAP) DATA												
	Category	**Totals**	**Numerical Inputs**				**Auto-Calculated Percentages**					
								Within Categories			**Across Categories**	
		# of RWHAP Clients			# Unmet Need	# In Care, Not Virally Suppressed		% Unmet Need	% In Care, Not Virally Suppressed		% Unmet Need	% In Care, Not Virally Suppressed
A	B	C			F	G		I	J		L	M
5	Total							F5/C5	G5/(C5-F5)		F5/F5	G5/G5
6	**PRIORITY POPULATIONS (Determined by Jurisdiction)**											
	Priority Population #1							F6/C6	G6/(C6-F6)		F6/F5	G6/G5
	Priority Population #2							F6/C6	G6/(C6-F6)		F6/F5	G6/G5
	Priority Population #3							F6/C6	G6/(C6-F6)		F6/F5	G6/G5

*The formulas in the cell within and across categories columns reflect the numbers in column A. The specific cell used should be based on the row of the calculation. For example, the % late diagnosed within category for HIV surveillance data priority population 1 is calculated by taking the number of late diagnosed for priority population 1 divided by the number of new diagnosed for priority population 1.

B.3 Calculation Table 1A- HIV Surveillance Data

Calculation Table 1A: Unmet Need Framework HIV Surveillance Data				
Jurisdiction Name:				
A	**B**	**C**	**D**	**E**
Years of data				
1	**New Diagnoses:** Most recent calendar year for which data are available			
2	**Care Patterns:** Most recent calendar year for which data are available			
3	**Population size:** Most recent 5 calendar year period for which data are available			
Definition/Description		**Number**	**Percent**	**Data Source**
Late Diagnosed				
4	**Late diagnoses:** Number of people with late diagnosed HIV in the most recent calendar year in the jurisdiction based on residence at time of diagnosis. Late diagnosed HIV is based on the first CD4 test result (<200 cells/mL or a CD4 percentage of total lymphocytes of <14) or documentation of an AIDS-defining condition ≤3 months after a diagnosis of HIV infection		C4/C5	HIV Surveillance data
5	**New diagnoses:** Number of people in the jurisdiction with HIV diagnosed in the most recent calendar year based on residence at time of diagnosis			
Population Size				
6	**Population size:** Number of people living with diagnosed HIV infection in the jurisdiction based on most recent known address who had an HIV diagnosis or any other HIV-related lab data (e.g., CD4, VL, genotype, or HIV test even if already diagnosed) reported to the HIV surveillance program during the most recent five calendar year period			HIV Surveillance data
Care Patterns				
7	**Met need (In care):** Number of people living with diagnosed HIV infection in the jurisdiction based on most recent known address with a CD4 test or VL test in the most recent calendar year		C7/C6	HIV Surveillance data; if linked databases are used please specify[1]
8	**Unmet need:** Number of people living with diagnosed HIV infection in the jurisdiction based on most recent known address without any CD4 or VL test in the most recent calendar year	C6-C7	C8/C6	
In Care, Viral Suppression				
9	**Virally suppressed:** Number of people living with diagnosed HIV infection in the jurisdiction who are in care and whose most recent viral load test result was <200 copies/mL in the most recent calendar year		C9/C7	HIV Surveillance data; if linked databases are used please specify[1]
10	**Not virally suppressed:** Number of people living with diagnosed HIV infection in the jurisdiction who are in care and whose most recent viral load test result was ≥200 copies/mL in the most recent calendar year	C7-C9	C10/C7	

B.4 Calculation Table 1B-RWHAP Data

Calculation Table 1B: Unmet Need Framework Ryan White HIV/AIDS Program (RWHAP) Data				
Jurisdiction Name:				
A	**B**	**C**	**D**	**E**
Year of data				
1	**Care Patterns:** Most recent calendar year for which data are available			
	Definition/Description	**Number**	**Percent**	**Data Source**
RWHAP Clients				
2	**RWHAP clients**: Number of RWHAP clients in the jurisdiction who received any RWHAP or RWHAP-related funded service in the most recent calendar year			RWHAP Database
Care Patterns				
3	**Met need (In care):** Number of RWHAP clients in the jurisdiction with a CD4 or VL test or OAHS visit[3] in the most recent calendar year		C3/C2	RWHAP Database; if linked databases are used please specify[2]
4	**Unmet need:** Number of RWHAP clients in the jurisdiction without any CD4, VL test or OAHS visit[3] in the most recent calendar year	C2-C3	C4/C2	
In Care, Viral Suppression				
5	**Virally suppressed:** Number of RWHAP clients in the jurisdiction who are in care and whose most recent viral load test result was <200 copies/mL		C5/C3	RWHAP Database; if linked databases are used please specify[2]
6	**Not virally suppressed:** Number of RWHAP clients in the jurisdiction who are in care and whose most recent viral load test result was ≥200 copies/mL	C3-C5	C6/C3	

B.5 Calculation Table 2A- Subpopulations HIV Surveillance Data

Calculation Table 2A: Subpopulation Analyses – HIV Surveillance Data													

Jurisdiction Name:

		Totals	Numerical Inputs					Auto-Calculated Percentages					
								Within Categories			Across Categories		
	Category	# of People Living with Diagnosed HIV Infection	# of New Diagnoses	# Late Diagnoses	# In Care	# Unmet Need	# In Care Not Virally Suppressed	% Late Diagnosed	% Unmet Need	% In Care Not Virally Suppressed	% Late Diagnosed	% Unmet Need	% In Care Not Virally Suppressed
A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Total							E1/D1	G1/C1	H1/F1	E1/E1	G1/G1	H1/H1
2	**CURRENT GENDER IDENTITY**												
	Male							E2/D2	G2/C2	H2/F2	E2/E1	G2/G1	H2/H1
	Female							E2/D2	G2/C2	H2/F2	E2/E1	G2/G1	H2/H1
	Transgender							E2/D2	G2/C2	H2/F2	E2/E1	G2/G1	H2/H1

3	RACE/ETHNICITY												
	American Indian/Alaska Native Non-Hispanic							E3/D3	G3/C3	H3/F3	E3/E1	G3/G1	H3/H1
	Asian Non-Hispanic							E3/D3	G3/C3	H3/F3	E3/E1	G3/G1	H3/H1
	Black/African American Non-Hispanic							E3/D3	G3/C3	H3/F3	E3/E1	G3/G1	H3/H1
	Hispanic/Latino							E3/D3	G3/C3	H3/F3	E3/E1	G3/G1	H3/H1
	Native Hawaiian/Pacific Islander Non-Hispanic							E3/D3	G3/C3	H3/F3	E3/E1	G3/G1	H3/H1
	White Non-Hispanic							E3/D3	G3/C3	H3/F3	E3/E1	G3/G1	H3/H1
	Multiple races Non-Hispanic							E3/D3	G3/C3	H3/F3	E3/E1	G3/G1	H3/H1
	Unknown							E3/D3	G3/C3	H3/F3	E3/E1	G3/G1	H3/H1
4	AGE												
	<13[4]							E4/D4	G4/C4	H4/F4	E4/E1	G4/G1	H4/H1
	13-24							E4/D4	G4/C4	H4/F4	E4/E1	G4/G1	H4/H1
	25-34							E4/D4	G4/C4	H4/F4	E4/E1	G4/G1	H4/H1
	35-44							E4/D4	G4/C4	H4/F4	E4/E1	G4/G1	H4/H1
	45-54							E4/D4	G4/C4	H4/F4	E4/E1	G4/G1	H4/H1
	55-64							E4/D4	G4/C4	H4/F4	E4/E1	G4/G1	H4/H1
	65+							E4/D4	G4/C4	H4/F4	E4/E1	G4/G1	H4/H1

5	**TRANSMISSION CATEGORY/HIV RISK FACTOR**												
	Male:												
	Male to male sexual contact							E5/D5	G5/C5	H5/F5	E5/E1	G5/G1	H5/H1
	Injection drug use (IDU)							E5/D5	G5/C5	H5/F5	E5/E1	G5/G1	H5/H1
	Male to male sexual contact & IDU							E5/D5	G5/C5	H5/F5	E5/E1	G5/G1	H5/H1
	Heterosexual contact							E5/D5	G5/C5	H5/F5	E5/E1	G5/G1	H5/H1
	Other/No Identified Risk							E5/D5	G5/C5	H5/F5	E5/E1	G5/G1	H5/H1
	Female:												
	Injection drug use							E5/D5	G5/C5	H5/F5	E5/E1	G5/G1	H5/H1
	Heterosexual contact							E5/D5	G5/C5	H5/F5	E5/E1	G5/G1	H5/H1
	Other/No Identified Risk							E5/D5	G5/C5	H5/F5	E5/E1	G5/G1	H5/H1
	Transgender:												
	Sexual contact							E5/D5	G5/C5	H5/F5	E5/E1	G5/G1	H5/H1
	Injection drug use							E5/D5	G5/C5	H5/F5	E5/E1	G5/G1	H5/H1
	Sexual contact & IDU							E5/D5	G5/C5	H5/F5	E5/E1	G5/G1	H5/H1
	Other/No Identified Risk							E5/D5	G5/C5	H5/F5	E5/E1	G5/G1	H5/H1

#													
6	**Geographic Unit (Determined by jurisdiction)**												
	Health Planning Area #1							E6/D6	G6/C6	H6/F6	E6/E1	G6/G1	H6/H1
	Health Planning Area #2							E6/D6	G6/C6	H6/F6	E6/E1	G6/G1	H6/H1
	Health Planning Area #3							E6/D6	G6/C6	H6/F6	E6/E1	G6/G1	H6/H1
	Health Planning Area #4							E6/D6	G6/C6	H6/F6	E6/E1	G6/G1	H6/H1
	Health Planning Area #5							E6/D6	G6/C6	H6/F6	E6/E1	G6/G1	H6/H1
	Health Planning Area #6							E6/D6	G6/C6	H6/F6	E6/E1	G6/G1	H6/H1
	Health Planning Area #7							E6/D6	G6/C6	H6/F6	E6/E1	G6/G1	H6/H1
	Unknown							E6/D6	G6/C6	H6/F6	E6/E1	G6/G1	H6/H1
7	**PRIORITY POPULATIONS (Determined by jurisdiction)**												
	Priority Population #1							E7/D7	G7/C7	H7/F7	E7/E1	G7/G1	H7/H1
	Priority Population #2							E7/D7	G7/C7	H7/F7	E7/E1	G7/G1	H7/H1
	Priority Population #3							E7/D7	G7/C7	H7/F7	E7/E1	G7/G1	H7/H1

*The formulas in the cell within and across categories columns reflect the numbers in column A. The specific cell used should be based on the row of the calculation. For example, the % late diagnosed within category for HIV surveillance data priority population 1 is calculated by taking the number of late diagnosed for priority population 1 divided by the number of new diagnosed for priority population 1.

B.6 Calculation Table 2B- Subpopulations RWHAP Data

Table 2B: Subpopulation Analyses – RWHAP Data

Jurisdiction Name:

		Totals	Numerical Inputs			Auto-Calculated Percentages			
						Within Categories		Across Categories	
	Category	# of RWHAP Clients	# In Care	# Unmet Need	# In Care Not Virally Suppressed	% Unmet Need	% In Care Not Virally Suppressed	% Unmet Need	% In Care Not Virally Suppressed
A	B	C	D	E	F	G	H	I	J
1	Total					E1/C1	F1/D1	E1/E1	F1/F1
2	**CURRENT GENDER IDENTITY**								
	Male					E2/C2	F2/D2	E2/E1	F2/F1
	Female					E2/C2	F2/D2	E2/E1	F2/F1
	Transgender					E2/C2	F2/D2	E2/E1	F2/F1
3	**RACE/ETHNICITY**								
	American Indian/Alaska Native Non-Hispanic					E3/C3	F3/D3	E3/E1	F3/F1
	Asian Non-Hispanic					E3/C3	F3/D3	E3/E1	F3/F1
	Black/African American Non-Hispanic					E3/C3	F3/D3	E3/E1	F3/F1
	Hispanic/Latino					E3/C3	F3/D3	E3/E1	F3/F1
	Native Hawaiian/Pacific Islander Non-Hispanic					E3/C3	F3/D3	E3/E1	F3/F1
	White Non-Hispanic					E3/C3	F3/D3	E3/E1	F3/F1
	Multiple races Non-Hispanic					E3/C3	F3/D3	E3/E1	F3/F1
	Unknown					E3/C3	F3/D3	E3/E1	F3/F1

4	**AGE**								
	<13					E4/C4	F4/D4	E4/E1	F4/F1
	13-24					E4/C4	F4/D4	E4/E1	F4/F1
	25-34					E4/C4	F4/D4	E4/E1	F4/F1
	35-44					E4/C4	F4/D4	E4/E1	F4/F1
	45-54					E4/C4	F4/D4	E4/E1	F4/F1
	55-64					E4/C4	F4/D4	E4/E1	F4/F1
	65+					E4/C4	F4/D4	E4/E1	F4/F1
5	**TRANSMISSION CATEGORY/HIV RISK FACTOR**								
	Male:								
	Male to male sexual contact					E5/C5	F5/D5	E5/E1	F5/F1
	Injection drug use (IDU)					E5/C5	F5/D5	E5/E1	F5/F1
	Male to male sexual contact & IDU					E5/C5	F5/D5	E5/E1	F5/F1
	Heterosexual contact					E5/C5	F5/D5	E5/E1	F5/F1
	Other/No Identified Risk					E5/C5	F5/D5	E5/E1	F5/F1
	Female:								
	Injection drug use (IDU)					E5/C5	F5/D5	E5/E1	F5/F1
	Heterosexual contact					E5/C5	F5/D5	E5/E1	F5/F1
	Other/No Identified Risk					E5/C5	F5/D5	E5/E1	F5/F1
	Transgender:								
	Sexual contact					E5/C5	F5/D5	E5/E1	F5/F1
	Injection drug use (IDU)					E5/C5	F5/D5	E5/E1	F5/F1
	Sexual contact & IDU					E5/C5	F5/D5	E5/E1	F5/F1
	Other/No Identified Risk					E5/C5	F5/D5	E5/E1	F5/F1

6	GEOGRAPHIC UNIT (Determined by jurisdiction)								
	Health Planning Area #1					E6/C6	F6/D6	E6/E1	F6/F1
	Health Planning Area #2					E6/C6	F6/D6	E6/E1	F6/F1
	Health Planning Area #3					E6/C6	F6/D6	E6/E1	F6/F1
	Health Planning Area #4					E6/C6	F6/D6	E6/E1	F6/F1
	Health Planning Area #5					E6/C6	F6/D6	E6/E1	F6/F1
	Health Planning Area #6					E6/C6	F6/D6	E6/E1	F6/F1
	Health Planning Area #7					E6/C6	F6/D6	E6/E1	F6/F1
	Unknown					E6/C6	F6/D6	E6/E1	F6/F1
7	PRIORITY POPULATIONS (Determined by jurisdiction)								
	Priority Population #1					E7/C7	F7/D7	F7/F1	F7/F1
	Priority Population #2					E7/C7	F7/D7	F7/F1	F7/F1
	Priority Population #3					E7/C7	F7/D7	F7/F1	F7/F1

*The formulas in the cell within and across categories columns reflect the numbers in column A. The specific cell used should be based on the row of the calculation. For example, the % late diagnosed within category for HIV surveillance data priority population 1 is calculated by taking the number of late diagnosed for priority population 1 divided by the number of new diagnosed for priority population 1.

Appendix C: What's New or Different about the Updated Unmet Need Framework

This appendix highlights how the updated Unmet Need Framework is different from the original Unmet Need Framework which RWHAP Part A and Part B recipients used for more than a decade. Refinements and rationale for changes are summarized below.

C1. *Required* Estimates and Analyses

1. **Data Source:** All required estimates and analyses can be completed using HIV surveillance data. HIV surveillance data includes all people living with diagnosed HIV infection.

2. **Population Size:** Population data for the estimates are based on the total number of people living with diagnosed HIV infection in the jurisdiction based on most recent known address, using the most recent five-year calendar period for which data are available.

   - **Five-year cohort:** A five-year cohort is now used rather than all people living with diagnosed HIV infection as of a specific date. The updated Framework only includes individuals who had an HIV diagnosis or any other HIV-related lab data reported to the HIV surveillance program during the most recent five-calendar-year period for which data are available. This change should minimize the number of people counted as out of care when they may actually be deceased or have relocated outside of the jurisdiction, but no updated address was identified.

   - **Use of most recent known address:** Rather than using residence at time of diagnosis, the updated Framework asks for the most recent known address for all components except for new diagnoses and late diagnoses, which use residence at time of diagnosis. This approach is consistent with current CDC practice regarding use of data for people living with diagnosed HIV infection. Individuals who are known to have moved out of the jurisdiction since their initial HIV diagnosis are not included in population size.

3. **Additional Components:** The original Framework asked only for an estimate of unmet need. The updated Framework requires two additional components:

   - **Late diagnoses**. Trends in late diagnoses help to understand the extent of delayed HIV testing in the jurisdiction. Delayed testing can often result in a more advanced HIV disease stage once an individual is diagnosed. These data are typically included in combined HIV epidemiologic profiles and therefore commonly available across jurisdictions.[23]

   - **In care, not virally suppressed**. The HIV care continuum includes the number of people living with diagnosed HIV infection who are virally suppressed. The Framework asks for related data: the number of people living with diagnosed HIV infection in the jurisdiction who are in care not virally suppressed. This information improves understanding of service outcomes.

4. **Operational Definitions of Met and Unmet Need:** The updated Framework defines met need or being in care as having at least one reported VL or CD4 test in the most recent calendar year. Both VL and CD4 are proxy measures for engagement in care (e.g., medical visits), which is not routinely captured in HIV surveillance data. A prescription for antiretroviral medications (ARV), which was the third measure in the original Framework, is no longer included. Its use would require jurisdictions to obtain data from another source, since ARVs are not tracked on an ongoing basis in HIV surveillance data. In updating the Framework, consideration was given to using only one measure, a reported VL test. Viral load testing is considered essential for providing appropriate client care and assessing clinical outcomes. CD4 tests are now much less important for making treatment decisions than they were when the original Unmet Need

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23   See the "Integrated Guidance for Developing Epidemiologic Profiles: HIV Prevention and Ryan White HIV/AIDS Program Planning, August 2014. The need to understand late testing is described in "Describing the Burden of HIV." Available at https://www.cdc.gov/hiv/pdf/guidelines_developing_epidemiologic_profiles.pdf.

Framework was developed. However, they are still included in the Department of Health and Human Services Guidelines for the Use of Antiretroviral Agents in Adults and Adolescents with HIV. The decision to continue using both VL and CD4 tests as measures of met need reflects field test results. Using both measures makes the estimate of unmet need more accurate in some jurisdictions, including jurisdictions that have incomplete lab reporting. A few jurisdictions still do not require reporting of all CD4 test and viral load test results or only recently implemented this requirement.

5. **Priority Populations:** Each jurisdiction must now identify three priority populations for analysis and provide data on the number and percent of individuals living with diagnosed HIV infection in each of these populations who were late-diagnosed, are not in care (have unmet need), and are in care not virally suppressed. Jurisdictions may choose the populations to include and the criteria for selecting them. There is no requirement that these be the same populations used for Early Identification of Individuals with HIV/AIDS (EIIHA) or the Minority AIDS Initiative (MAI). HRSA HAB may provide additional guidance on selection of these populations in the Notice of Funding Opportunity (NOFO).

6. **Additional Refinements:** Some additional refinements have been made in the updated Framework to make it more accurate and useful. Among the important changes:

   - **No separation of people with HIV/non-AIDS and people living with AIDS:** With the emphasis on early and continuous access to antiretroviral medications, care patterns are now similar, and data should be presented together for all people living with diagnosed HIV infection regardless of stage of disease.

   - **Most recent calendar year:** The same 12-month period should be used for all Unmet Need estimates and analyses. It should be a calendar year, and the most recent year for which data are available, meaning that they are complete, cleaned, and ready to be released publicly. Program years vary, but HIV surveillance data are analyzed on a calendar year basis, and epidemiologic profiles, HIV care continuum and RWHAP RSR data are also based on the calendar year. CDC now uses data with a 12-month reporting delay for surveillance reports and annual indicators. For example, CDC uses data reported through December 2019 to report on diagnoses/indicators for 2018 and earlier years.

C2. *Enhanced* Estimates and Analysis

The *enhanced* estimates and analyses suggest several additional analyses to help jurisdictions better understand and address unmet need and viral suppression. These were not part of the original Framework for estimating unmet need.

1. **Data Sources:** All data needed for implementing the *enhanced* estimates and analyses are available in either eHARS or the RWHAP client-level data systems used by RWHAP Part A and Part B recipients. The information for jurisdiction-wide subpopulation analyses is available in eHARS. The information for estimating and assessing unmet need and conducting subpopulation analyses for RWHAP clients is collected in RWHAP client-level data systems. Because eligibility for RWHAP services includes a diagnosis of HIV, the Framework assumes that clients in the program are included in the HIV surveillance data, even if linked databases are not being used.

2. **Data Quality:** Some RWHAP client-level data systems may include self-reported CD4 or VL test results from clients. CD4 and VL test results should only be used if the data are from a clinical data source (i.e. lab report, clinician documentation); client self-report should not be used.

3. **Definition of Met Need/In Care for RWHAP clients:** The *enhanced* estimates and analyses provides one definition of met need for RWHAP clients, but jurisdictions have the flexibility to refine that definition or add an optional definition:

- The definition of met need includes at least one CD4 or VL test or an OAHS visit.

- If the jurisdiction funds little or no OAHS and/or feels for some other reason that use of a different or additional service category will provide more accurate estimates and analyses of met and unmet need, that service can be added. Any additional service categories used should be clearly documented. During the field test, some jurisdictions felt that including a prescription for ARV or an RWHAP ADAP insurance or medication service improved their estimates.

4. **Linked Databases:** Jurisdictions may choose to use linked databases (e.g., HIV surveillance RWHAP, RWHAP ADAP, Medicaid, etc.) to refine estimates and analyses. Linked databases rely on using name, social security number, or some other unique identifier to link clients across databases, resulting in more information about each individual than would otherwise be available through HIV surveillance or RWHAP data alone. For example, HRSA HAB recognizes that some jurisdictions have limited VL data in their RWHAP client-level database but could obtain this from HIV surveillance data. Jurisdictions that choose to use linked databases should specify the databases used. Linked databases can only be used for care pattern definitions and virally suppression, but not for population size or for number of RWHAP clients.

5. **Subpopulation Analysis:** While not required except for the inclusion of three priority populations, subpopulation analyses are recommended because they provide data valuable for planning and decision-making. This information can help jurisdictions better prioritize resources and services to find people who are out of care, link or re-engage them to care, and adjust services to meet their needs. In the original Unmet Need Framework, subpopulation analyses were considered an important part of the *assessment* of unmet need but were not required as part of the *estimate*. The enhanced estimates and analyses recommend subpopulation analyses for both HIV surveillance and RWHAP data. The suggested data elements for subpopulation analyses are typically reported in both HIV surveillance data and RWHAP data specific to reporting requirements for the RSR. They include current gender identity (or sex at birth if that is not available for HIV surveillance data), race/ethnicity, age, transmission category, and most recent known address, which can be used to categorize persons into geographic regions (such as health districts or other groups utilized by jurisdictions). The CDC SAS program will run subpopulation analyses for HIV surveillance data.

Appendix D: HIV-Related Lab Tests for Population Size for HIV Surveillance Data

The following lab tests were used in the CDC SAS program for determining the population size used for HIV surveillance data. Jurisdictions that are not using the CDC SAS program should ensure consistency in the use of lab tests.

Lab_Test_CD	LABEL
EC-001	(EC-001) HIV-1 IA (EIA or Other)
EC-002	(EC-002) HIV-1/2 IA (EIA or Other)
EC-003	(EC-003) HIV-2 IA (EIA or Other)
EC-004	(EC-004) HIV-1/2 Ag/Ab
EC-005	(EC-005) HIV-1/2 Type-Differentiating Immunoassay (Initial)
EC-006	(EC-006) HIV-1 Western Blot
EC-007	(EC-007) HIV-2 Western Blot
EC-008	(EC-008) HIV-1 IFA
EC-009	(EC-009) HIV-1 Culture
EC-010	(EC-010) HIV-2 Culture
EC-011	(EC-011) HIV-1 p24 Antigen
EC-012	(EC-012) HIV-1 RNA/DNA NAAT (Qualitative)
EC-013	(EC-013) HIV-2 RNA/DNA NAAT (Qualitative)
EC-014	(EC-014) HIV-1 RNA/DNA NAAT (Quantitative viral load)
EC-015	(EC-015) HIV-2 RNA/DNA NAAT (Quantitative viral load)
EC-016	(EC-016) CD4 T-lymphocytes
EC-017	(EC-017) CD4 Percent
EC-018	(EC-018) HIV-1 Genotype (PR Nucleotide Sequence)
EC-019	(EC-019) HIV-1 Genotype (RT Nucleotide Sequence)
EC-020	(EC-020) HIV-1 Genotype (PR/RT NucleotideSequence)
EC-021	(EC-021) HIV-1 Genotype (IN Nucleotide Sequence)

Lab_Test_CD	LABEL
EC-022	(EC-022) HIV-1 Genotype (PR/RT/IN Nucleotide Sequence)
EC-023	(EC-023) STARHS (BED)
EC-024	(EC-024) STARHS (Vironostika-LS)
EC-025	(EC-025) STARHS (Avidity)
EC-026	(EC-026) STARHS (Other)
EC-027	(EC-027) STARHS (Unknown)
EC-028	(EC-028) Rapid (Retired)
EC-029	(EC-029) HIV-1/2 Ag/Ab-Differentiating Immunoassay
EC-030	(EC-030) HIV-1 Genotype (EN Nucleotide Sequence)
EC-031	(EC-031) HIV-1 Genotype (FI Nucleotide Sequence)
EC-032	(EC-032) HIV-1/2 Ag/Ab and Type-Differentiating Immunoassay
EC-036	(EC-036) HIV-1/2 Type-Differentiating Immunoassay (Supplemental)
EC-039	(EC-039) HIV-1 Genotype (Unspecified)
EC-040	(EC-040) HIV-1 Genotype (xxxx…)
…	…
EC-053	(EC-053) HIV-1 Genotype (xxxx…)
Note: Lab_Test_CD from "EC-040" to "EC-053" belongs to HIV-1 Genotype by variety method.	